hp LaserJet quick reference service guide

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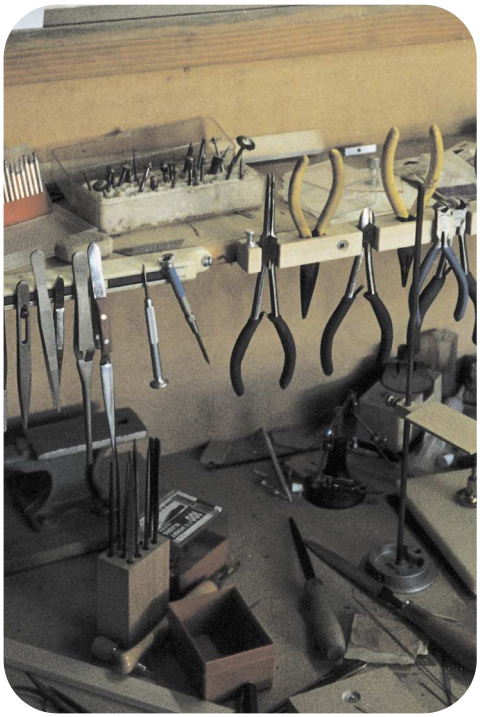

color service volume III

hp color LaserJet quick reference service guide

volume III
March 2004 edition

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Ordering other manuals

This *HP Color LaserJet Family Quick Reference Service Guide* has been created to help the HP LaserJet service engineer quickly troubleshoot common printer problems. Although this reference is intended to provide information that the service engineer needs for onsite repair of HP LaserJet color products, it is not intended to replace the service manual for any product. For detailed information about the HP color LaserJet products described in this guide, see the user guide or service manual for that product.

Service manuals for HP LaserJet products are available from Hewlett-Packard. This is the phone number for the Service Parts Order Desk:

800-227-8164 (U.S. only)

If you are located outside of the U.S., contact your local HP Sales and Service Office, see “Service support” on page 395.

Supported products

Note

This guide will be updated as the service needs change, as new products are introduced, or as information becomes available

Table 0-1 Supported products

Supported product	Model number	Maximum pages per month (printing)	Service manual part number
CLJ 2500 CLJ 2500L CLJ 2500n CLJ 2500tn CLJ 2500se	C9706A C9705A C9707A C9708A C9694A	30,000	C9706-90926
CLJ 3500 CLJ 3500n	Q1319A Q1320A	30,000	Q1321-90930
CLJ 3700 CLJ 3700n CLJ 3700dn CLJ 3700dtn	Q1321A Q1322A Q1323A Q1324A	30,000	Q1321-90930
CLJ 4500 CLJ 4500N CLJ 4500dn	C4084A C4089A C4094A	35,000	C7085-90921
CLJ 4550 CLJ 4550n CLJ 4550dn CLJ 4550hdn	C7085A C7086A C7087A C7088A	35,000	C7085-90921
CLJ 4600n CLJ 4600dn CLJ 4600dtn CLJ 4600hdn	C9660A C9661A C9662A C9663A	85,000	C9660-90901
CLJ 5500 CLJ 5500n CLJ 5500dn CLJ 5500dtn CLJ 5500htn	C9656A C7131A C9657A C9658A C9659A	120,000	C9656-90930
CLJ 8500 CLJ 8500n CLJ 8500dn	C3983A C3984A C3985A	60,000	C7096-90986

Table 0-1 Supported products (continued)

Supported product	Model number	Maximum pages per month (printing)	Service manual part number
CLJ 8550 CLJ 8550n CLJ 8550dn CLJ 8550gn CLJ 8550mfp	C7096A C7097A C7098A C7099A C7834A	60,000	C7096-90986
CLJ 9500n CLJ 9500hdn	C8546A C8547A	60,000	C8546-90956

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Using the control panel

This section has information about the layout of each product control panel and how to set the control-panel display language.

Control-panel layouts

CLJ 2500 control-panel layout

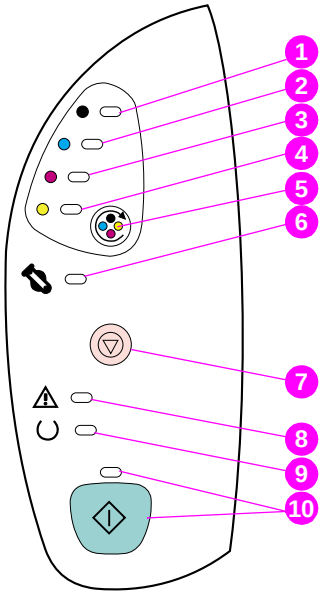

Figure 1-1 Control-panel layout (CLJ 2500)

1 Black print cartridge light	**6** Imaging drum light
2 Cyan print cartridge light	**7** CANCEL JOB button
3 Magenta print cartridge light	**8** Attention light (amber)
4 Yellow print cartridge light	**9** Ready light (green)
5 ROTATE CAROUSEL button	**10** GO button and Go light (green)

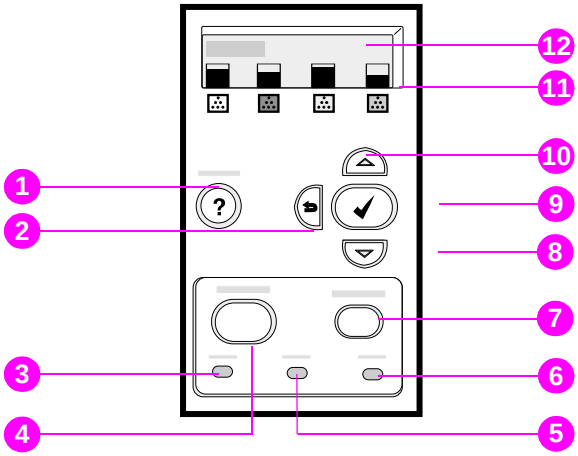

Figure 1-2 Control-panel layout (CLJ 3500/3700)

1 help button

2 back arrow button

3 ready light

4 menu button

5 data light

6 attention light

7 stop button

8 down arrow button

9 select button

10 up arrow button

11 print cartridge level indicator

12 display

CLJ 4500/4550 control-panel layout

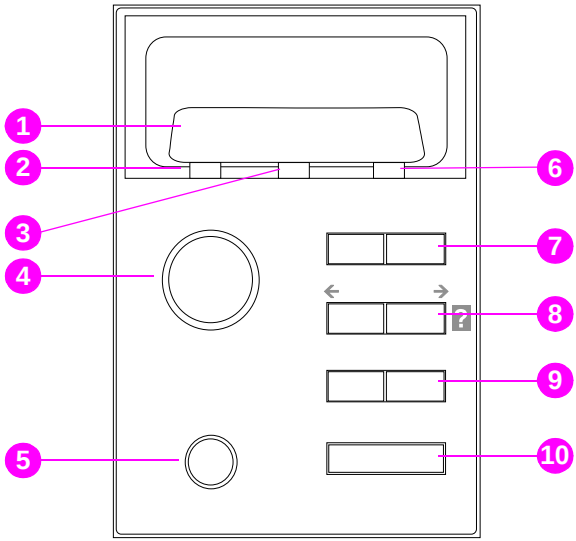

Figure 1-3 Control-panel layout (CLJ 4500/4550)

1 Control-panel display
2 Ready light
3 Data light
4 GO button
5 CANCEL JOB button
6 Attention light
7 MENU button*
8 ITEM button*
9 VALUE button*
10 SELECT button

* Rocker buttons

CLJ 4600/5500 control-panel layout

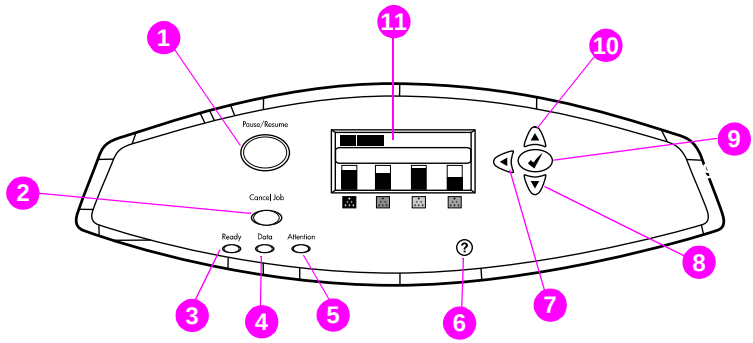

Figure 1-4 Control-panel layout (CLJ 4600/5500)

1 PAUSE/RESUME button
2 CANCEL JOB button
3 Ready light
4 Data light
5 Attention light
6 Help button
7 Back arrow button
8 Down arrow button
9 SELECT button
10 Up arrow button
11 Control-panel display

CLJ 8500/8550 control-panel layout

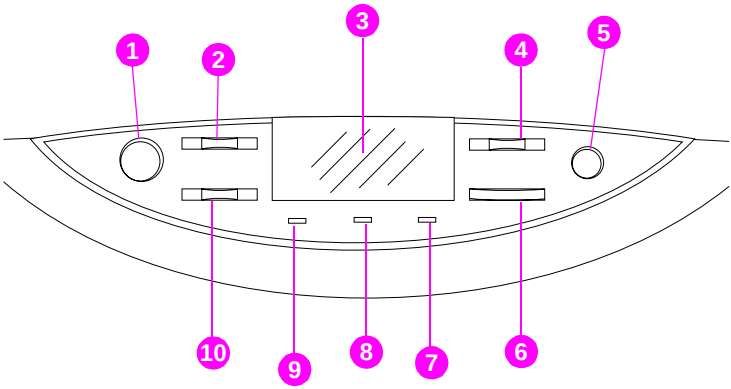

Figure 1-5 Control-panel layout (CLJ 8500/8550)

1. GO button
2. MENU button
3. Control-panel display
4. -VALUE+ button
5. CANCEL JOB button
6. SELECT button
7. Attention (amber) light
8. Data (green) light
9. Ready (green) light
10. ITEM button

CLJ 9500 control-panel layout

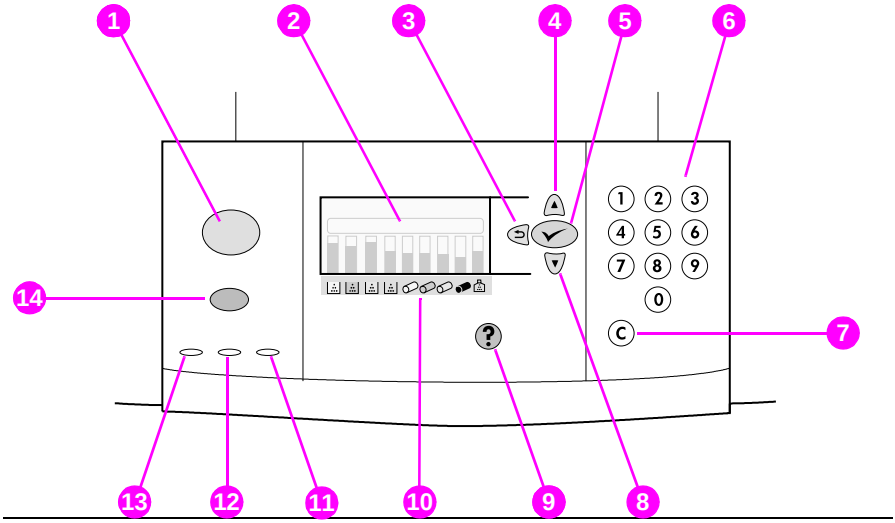

Figure 1-6 Control-panel layout (CLJ 9500)

1 PAUSE/RESUME button
2 Graphical display
3 BACK button
4 UP button
5 SELECT button
6 Numeric keypad
7 CLEAR button
8 DOWN button
9 HELP button
10 Supplies-staus indicators
11 Attention light (red)
12 Data light (green)
13 Ready light (green)
14 Cancel job button

Setting the control-panel display language

Note
This section only applies to products that have a control-panel display.

Product	Procedure
CLJ 2500	This product does not have a control-panel display.
CLJ 3500 CLJ 3700	**1** Press MENU. **2** Press the DOWN ARROW to highlight CONFIGURE DEVICE, and then press SELECT. **3** Press the DOWN ARROW to highlight SYSTEM SETUP, and then press SELECT. **4** Press the DOWN ARROW to highlight LANGUAGE, and then press SELECT. **5** Press the UP ARROW or DOWN ARROW to select the appropriate language, and then press SELECT to set the selection. **6** Press MENU.
CLJ 4500 CLJ 4550	**1** Press and hold SELECT at the printer control panel while turning the printer on. Continue holding SELECT until SELECT LANGUAGE (in English) appears on the control-panel display, and then release the SELECT button. **2** When LANGUAGE=ENGLISH * appears on the control-panel display, press VALUE repeatedly until the appropriate language appears. **3** Press SELECT to save the language selection. An asterisk appears next to the selected language. **4** Press GO. After the printer warms up, READY appears on the control-panel display in the selected language. **Note** If the message does not appear in the language that you selected, press the printer standby button (power switch) and repeat the instructions for changing the display language.

Product	Procedure
CLJ 4600 CLJ 5500	**1** Press SELECT to open the MENUS. **2** Press the DOWN ARROW to highlight CONFIGURE DEVICE, and then press SELECT. **3** Press the DOWN ARROW to highlight SYSTEM SETUP, and then press SELECT. **4** Press DOWN ARROW to highlight LANGUAGE, and then press SELECT. **5** Press UP ARROW or DOWN ARROW to select the appropriate language, and then press SELECT to set the selection. **6** Press PAUSE/RESUME.
CLJ 8500 CLJ 8550	**1** Press and hold SELECT while turning the printer on. When CONFIG LANGUAGE (in English) appears on the control-panel display for approximately one second, release SELECT. When the printer has restarted, LANGUAGE = ENGLISH appears on the display. **Note** Only -VALUE+, SELECT, and GO are active while the display language is being configured. All other buttons are ignored. If you press GO without selecting a language, the printer brings itself online and all subsequent messages are in English. However, because no display language was selected, the LANGUAGE = ENGLISH message reappears (after the power-on self test) when the printer is turned on again. This message appears every time the printer is turned on until you select a language by using this procedure. **2** Press -VALUE+ until the language you want appears on the control-panel display. **3** Press SELECT to save the selection. An asterisk (*) appears to the right of the selection. The language that is selected is the default language until another selection is made by using this procedure. **4** Press GO. **5** Turn the printer off and back on.
CLJ 9500	**1** Press ✓ to open the menus. **2** Use ▲ or ▼ to scroll to CONFIGURE DEVICE, and then press ✓. **3** Use ▲ or ▼ to scroll to SYSTEM SETUP, and then press ✓. **4** Use ▲ or ▼ to scroll to LANGUAGE, and then press ✓. **5** Use ▲ or ▼ to scroll to the appropriate language, and then press ✓. **6** Press PAUSE/RESUME to close the menus.

Upgrading the firmware

You can use several methods to upgrade the product firmware. The following table shows whether or not your product has firmware available at www.hp.com.

Product	Firmware available	Location on HP website
CLJ 2500	3.002.00	Not available at the Web site
CLJ 3500 CLJ 3700	Yes	Not available at the Web site
CLJ 4500 CLJ 4550	Yes	Not available at the Web site
CLJ 4600	Yes	http://www.hp.com/go/clj4600_firmware
CLJ 5500	Yes	http://www.hp.com/go/clj5500_firmware
CLJ 8500 CLJ 8550	Yes	Not available at the Web site
CLJ 9500	Yes	http://www.hp.com/go/clj9500_firmware

The following is a list of procedures available for upgrading firmware:

- “Using Internet Explorer (for flashable firmware)” on page 11
- “Using HP Web Jetadmin” on page 11
- “Using a manual download (for parallel connections)” on page 12
- “Using FTP” on page 13

Using Internet Explorer (for flashable firmware)

This procedure describes how to upgrade a single printer by using a Web browser and file transfer protocol (FTP). This method works with Internet Explorer 5.*x* and later.

1. Before you can use Internet Explorer as an FTP client, you need to change a browse setting:
   a. In Internet Explorer, on the **Tool** menu, click **Internet Options**.
   b. On the **Advanced** tab, select the **Enable folder view for FTP sites** check box, and then click **OK**.
2. Download the firmware image file from the HP website (www.hp.com). The firmware image file is located on the Driver Download page for each specific printer model.
3. Locate the downloaded file on your computer and run the .EXE file to extract the downloaded files.

   The following example uses the HP LaserJet 9000 printer as an example. Two files are created in a folder named “lj9000.rfu”, which is the new firmware file, and a README file, which explains how to download it to the printer. The following instructions are taken from this readme file.
4. Open a Windows Explorer window and browse to the folder that contains the .RFU file.
5. In the URL address text box, type the letters FTP, type the IP address of the printer, and then press ENTER on the keyboard. For example type, FTP://192.168.0.1.

   A folder named “Port 1” appears in the browser window.
6. Drag the .RFU file from the Windows Explorer window to the window in Internet Explorer.

   The printer should now indicate that it is performing the upgrade.

Using HP Web Jetadmin

1. Print a configuration page to determine the printer’s IP address.
2. Go to the main page for HP Web Jetadmin. Go to http://www.hp.com/go/webjetadmin to download HP Web Jetadmin for Microsoft® Windows® or Linux.
3. For a single printer, select the IP hostname or IP address of the printer in the Quick Device Find field in the upper-right corner and then click **Go**. For

multiple printer updates, see the HP Web Jetadmin User documentation.

4 Click the right arrow below **Go** and move to the **Update** menu option.

5 Select **Update** and **Update Printer** (*not* Update Jetdirect) and continue.

6 Click **Browse** to locate the firmware image file that you downloaded from the Internet.

7 Click **Upload** to move the firmware image file from the C: drive to the HP Web Jetadmin server.

8 Click **Refresh** in the upper-right corner. (It looks like a page that contains two arrows in a circle.)

9 Select the date code to send to the printer (firmware file name). The date code format is YYYYMMDD. YYYY is 200*x* (the year), and MM and DD are the month and the date.

10 Click **Update Firmware**. HP Web Jetadmin sends the selected image to the printer.

Using a manual download (for parallel connections)

1 Print a configuration page to determine the firmware version.

2 Download the firmware from the HP Web site and copy it to a directory on the computer.

3 Open up a Command Prompt (MS-DOS prompt) window by using one of the following procedures:

- Click **Start**, point to **Programs**, and then click **Command Prompt**.
- Click **Start**, point to **Programs**, point to **Accessories**, and then click **Command Prompt**.

4 Change the drive and the directory to indicate where the firmware file is located.

5 Use one of the following procedures:

- For a parallel-connected printer: Type **copy /b** *filename port name*, where *filename* is the firmware file name and *port name* is the name of the port, such as *LPT1*.
- For a shared printer: Type **copy /b** *filename port name**computername**sharename*, where *filename* is the firmware file name and *port name* is the name of the port, such as *LPT1*.

The message `PERFORMING UPGRADE` appears on the control panel.

Using FTP

1 Connect the printer to the network.

2 Verify that the product is configured with an IP address (you might need to configure the I/O device TCP/IP-DHCP).

3 Print a configuration page. The EIO HP Jetdirect page contains the IP Address and the Host Name.

4 Open up a Command Prompt (MS-DOS prompt) window by using one of the following procedures:

- Click **Start**, point to **Programs**, and then click **Command Prompt**.
- Click **Start**, point to **Programs**, point to **Accessories**, and then click **Command Prompt**.

5 In the command prompt window, change to the drive by typing “C:”.

6 Type the directory in which the .RFU file resides: “cd c:*folder name in which the .rfu resides*”.

7 At the C:\> type the FTP IP address (for example, C:\>ftp 12.34.56.78).

8 Press ENTER, if prompted for a user name, and then press ENTER again, if prompted for a password.

9 Type **put** (file name .RFU).

Note

If the connection timed out message appears, type “bye” and go back to step 7. Various messages appear while the update is in progress.

10 Type “bye” when the FTP prompt returns. This could take a few minutes.

11 Exit at the regular Command Prompt to return to Windows.

2 Service and troubleshooting

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Troubleshooting

When the printer malfunctions or encounters an unexpected situation, information on the printer control panel (messages or illuminated LEDs) alert you to the situation. This section contains a pre-troubleshooting checklist that helps eliminate many possible causes of the problem. The remainder of the chapter provides steps for correcting the problems that have been identified.

Before beginning any trouble shooting procedure, check the following:

- Are supply items (for example, the print cartridges, fuser, and rollers) within their rated life?
- Does the configuration page reveal any configuration problems? See “Configuration page” on page 31.

Note

The customer is responsible for checking and maintaining supplies, and for using supplies that are in good condition. The customer is responsible for media and print-cartridge supplies. The customer is also responsible for replacing the fuser, transfer roller, and all paper pickup, feed, and separation rollers that are at or near the end of their rated life.

Pre-troubleshooting checklist

WARNING!
Always turn off and then unplug the printer before servicing. Current is present in the dc power supply whenever the printer is plugged in.

Before troubleshooting any specific printer problem, evaluate the following printer conditions:

Note
This is a generalized troubleshooting list. Not all checklist items will apply to all of the printers in this guide.

- Is the printer on and does a readable message appear on the control-panel display (for the CLJ 2500: is the Ready LED illuminated)?
  - **Yes**. Proceed with troubleshooting.
  - **No**. Make sure that the printer is plugged in and turned on. Verify that the fan(s) or motor(s) briefly run. If the printer has a control panel, but no messages appear on the display, verify that the control-panel display wire-harness is connected at both ends. Verify that the firmware DIMM(s) are seated and operating correctly. Remove any HP Jetdirect or other EIO cards, and then try to turn the printer on again. Check the fuse on the power supply to make surethat it is not open.
- Does an error message appear on the control-panel display or do the control-panel LEDs indicate a service error?
  - **Yes**. Use the error message or control-panel lights (CLJ 2500) section of this chapter to understand the message or LED pattern. Print an event log and look for reoccurring errors.
  - **No**. Proceed with troubleshooting.
- Can you print a configuration page?
  - **Yes**. Proceed with troubleshooting.
  - **No**. If an error message or service LED pattern appears on the control panel when you attempt to print a configuration page, use the error message or control-panel lights (CLJ 2500) section of this chapter to understand the message or LED pattern.
- Does the print quality meet the customer's requirements?
  - **Yes**. Proceed with troubleshooting.
  - **No**. Verify that the correct media is being used and that it has been correctly stored. Compare the images with the print defect samples that are contained in the printer service manual.

- Can the customer print successfully from the host computer?
  - **Yes.** Troubleshooting is complete.
  - **No.** Check the following maintenance, media, voltage, environmental, hardware, and configuration conditions. Repeat the corrective actions for the control-panel error message, service LED pattern, or image defect until all errors and defects are corrected.

Maintenance

- Has the printer been maintained on a regular basis?
- Are all of the maintenance units within their rated life?

Media

- Is the customer using media as specified in the printer user guide and in the *HP LaserJet Family Print Media Guide*?
- Is the media stored correctly and within environmental limits?

Voltage

Has the line voltage been checked to make sure that it meets the printer requirements? (Large motors used near the printer can cause temporary voltage changes.) See “Electrical specifications” on page 28.

Operating environment

- Is the operating environment within the parameters listed in the printer service manual?
- Is the printer installed on a solid, level surface?
- Is the printer protected from substances such as office cleaning materials and the ammonia gas that is produced by diazo copiers?
- Is the printer protected from direct sunlight?

Non-HP components

- Have all non-HP components (toner, typeface DIMMs, memory boards, and EIO cards) been removed from the printer?

CAUTION

Hewlett-Packard recommends the use of HP products in this printer. Use of non-HP products can cause problems that require service not covered by the Hewlett-Packard warranty or service agreements.

Hardware

- Are the ITB (or ETB) unit and fusing unit seated correctly?
- Are all doors, drawers, and covers closed?
- (For the CLJ 4500) Is the duplex-unit power cord plugged into the printer, and is the power-supply plug connected to the duplexer?

Configuration

- Has the printer hardware or software configuration changed?
- Could the problem be associated with any specific software?
- Could the problem be related to network configuration changes? Remove the printer from the network and make sure that the failure is associated with the printer before beginning troubleshooting.

Basic troubleshooting

- Does the printer perform the initialization and power-on steps? See “Does the printer turn on successfully?” on page 22.
- Does the control panel show READY, OFFLINE, or POWERSAVE ON? See “Is the printer ready?” on page 24.
- Does the event log show repeating errors? See “Troubleshooting by using control-panel messages” on page 39.
- Does media jam in the printer? See “Jams” on page 293.
- Will the printer print information pages? See “Printing information pages” on page 31.
- Does the print quality meet the customer’s expectations? See “Image quality” on page 330.
- Can the customer print from the host system? See the appropriate service manual for the product.

Table 2-1 Basic troubleshooting

#	Verification steps	Possible problems	Solutions
1	Does the printer turn on successfully? When the printer is connected to a grounded power source, the control-panel lights should be illuminated, and the fans should run. On the CLJ 2500, the control-panel lights should cycle one after another and the cartridge carousel should rotate.	No power.	**1** Verify that the printer is plugged into an active electrical outlet of the correct voltage. **2** Verify that the power cable is functional. **3** Verify that the power switch is on (CLJ 2500), that the power-on button is pushed in (CLJ 4500), that the power switch is switched on (CLJ 3500, CLJ 3700, CLJ 4600, CLJ 5500, and CLJ 9500), or that the three power switches are all switched on (CLJ 8500 and CLJ 8550). **4** (CLJ 8500 and CLJ 8550 only) Verify that the circuit breaker in the copy module has not been tripped). **5** (CLJ 9500 only) Make sure that the switch is set to low-voltage power supply linkage if you suspect a switch problem.

Table 2-1 Basic troubleshooting

#	Verification steps	Possible problems	Solutions
	Does the printer turn on successfully? continued	The control panel is blank.	**1** Remove any HP Jetdirect or other EIO cards, and then try to turn the printer on again. **2** Check the fuse(s) in the power supply, and replace the power supply if necessary. **3** Verify that the DC controller is functioning, and replace if necessary.
		(CLJ 2500 only) Control-panel lights do not cycle.	Verify that the control-panel cable is seated in both the control panel and the formatter. If the cable is connected correctly, replace the control panel. Verify that the DIMMs are seated correctly in the DIMM slots.
		(CLJ 4500 only) The front-panel display is dark, and an error message appears.	**1** Verify that the ribbon cable is seated in both the formatter and the DC controller. **2** Replace the interconnect PCB.
		(CLJ 9500 only) Fan operation is incorrect.	The fan operation is important because all of the fans are controlled by the DC controller PCA. Fans 1 through 6 operate at full speed for 30 seconds during the WAIT period. Fans 1 through 5 slow to half-speed, and fan 6 stops during the STBY period, and when the printer is in PowerSave mode. Make sure that the printer is not in PowerSave mode.

Table 2-1 Basic troubleshooting

#	Verification steps	Possible problems	Solutions
2	Is the printer ready? The printer should function without error-indicator-light messages appearing on the control panel or (CLJ 2500 only) error messages appearing on the Printer Status and Alerts screen.	Control-panel lights, other than the Ready light, are on or blinking.	Consult the lists of control-panel light messages to identify and correct the error.
		(CLJ 2500 only) An error message appears in the Printer Status and Alerts screen.	See the appropriate service manual.
		A problem exists, but no control-panel lights are on or blinking, and no messages appear on the Printer Status and Alerts screen.	See the appropriate service manual.
3	Do engine tests and information pages print? Print an engine test (see page 269). For the CLJ 2500, turn the printer off and then on again before printing an engine test. The engine test should print without paper-feed problems or print-quality problems. Also print a Demo page or a configuration page (see page 31).	**Note** The formatter must be connected to a power source to perform an engine test.	
		The engine test is not successful.	See the appropriate service manual.
		An error-indicator light message appears on the control panel.	Consult the lists of control-panel light messages to identify and correct the error.
		(CLJ 2500 only) Printer Status and Alerts software generates an error message.	See “Troubleshooting by using control-panel messages” on page 39.
		Poor print quality.	See “Image quality” on page 330.
4	Is the software installed correctly?	The software is not installed or an error occurred during software installation.	Uninstall and then reinstall the printer software. Make sure that you use the correct installation procedure and the correct port setting.

Table 2-1 Basic troubleshooting

#	Verification steps	Possible problems	Solutions
5	Does the printer print from the computer? Connect the parallel cable or USB cable to the printer and to the computer. Use a word-processing program to send a print job to the printer.	A USB cable and a parallel cable are both connected to the printer.	When both cables are connected, the USB automatically disables itself. Disconnect both cables and then reinstall the one you want to use.
		The cable is not connected correctly.	Reconnect the cable.
		An incorrect printer driver is selected.	Reset the printer driver. (Make sure that port setting is correct.)
		Other devices are connected to the parallel port.	Disconnect the other devices and try to print again.

Environmental specifications

Table 2-2 Operating environment specifications

Product	Item	Operating	Storage
CLJ 2500	Temperature (printer and print cartridge)	15° to 32.5°C (59° to 90.5°F)	-20° to 40°C (-4° to 104°F)
	Relative humidity (RH)	10% to 80%	95% or less
CLJ 3500 CLJ 3700	Temperature Recommended Allowed	 17° to 25°C (63° to 77°F) 10° to 27°C (50° to 81°F)	 0° to 35°C (32 to 95°F) -20° to 40°C (-4° to 104°F)
	Humidity Recommended Allowed	 20% to 60% RH 10% to 70% RH	 35% to 85% RH 10% to 95% or less
	Altitude Allowed	 0 to 2600 m (0 to 8530 ft)	 0 to 2600 m (0 to 8530 ft)
CLJ 4500 CLJ 4550	Temperature Recommended Allowed	 20° to 26°C (68 to 79°) 15 to 30°C (59 to 86° F)	 0° to 35° C (32 to 95° F) -20° to 40° C (-4° to 104° F)
	Humidity Recommended Allowed	 20% to 50% RH 10% to 80% RH	 35% to 85% RH 95% or less
	Altitude Allowed	 0 to 3100 m (0 to 10,000 ft)	 0 to 3100 m (0 to 10,000 ft)

Table 2-2 Operating environment specifications

Product	Item	Operating	Storage
CLJ 4600	Temperature Recommended Allowed	 17° to 25°C (63° to 77°F) 10° to 30°C (50° to 86°F)	 0° to 35°C (32° to 95°F) -20° to 40°C (-4° to 104°F)
	Humidity Recommended Allowed	 30% to 70% RH 10% to 80% RH	 35% to 85% RH 95% or less
	Altitude Allowed	 0 to 2600 m (0 to 8530 ft)	 0 to 2600 m (0 to 8530 ft)
CLJ 5500	Temperature Recommended Allowed	 17° to 25°C (63° to 77°F) 10° to 30°C (50° to 86°F)	 0° to 35°C (32° to 95°F) -20° to 40°C (-4° to 104°F)
	Humidity Recommended Allowed	 30% to 70% RH 20% to 80% RH	 35% to 85% RH 95% or less
	Altitude Allowed	 0 to 2600 m (0 to 8530 ft)	 0 to 2600 m (0 to 8530 ft)
CLJ 8500 CLJ 8550	Temperature Recommended Allowed	 20° to 26° C (68° to 79° F) 15° to 30° C (59 to 86° F)	 0° to 35° C (32° to 95° F) -20° to 60° C (-4° to 140° F)
	Humidity Recommended Allowed	 20% to 50% RH 10% to 80% RH	 35% to 85% RH 10% to 95% RH
	Altitude Allowed	 0 to 3,048 m (0 to 10,000 ft)	 0 to 3,048 m (0 to 10,000 ft)
CLJ 9500	Temperature Recommended Allowed	 20° to 26°C (68° to 79°F) 10° to 30°C (50° to 86°F)	 20° to 26°C (68° to 79°F) 15° to 30°C (59° to 86°F)
	Humidity Recommended Allowed	 20% to 50% 10% to 80%	 5% to 95% 5% to 95%

Table 2-3 Electrical specifications

Product	Item	110-volt models	220-volt models
CLJ 2500	Power requirement	115 to 127 V (+/- 10%) 60 Hz (+/- 2Hz)	220 to 240 V (+/- 10%) 50 Hz (+/- 2 Hz)
	Power consumption	Printing color = 400 W Printing mono = 224 W Standby = 30 W Off = 0 W	Printing color = 403 W Printing mono = 217 W Standby = 31 W Off = 0 W
	Minimum recommended circuit capacity (for a typical product)	12 Amps	6 Amps
CLJ 3500	Power requirement	100 to 127 V (+/-10%) 50 to 60 Hz (+/- 2 Hz)	220 to 240 V (+/-10%) 50 to 60 Hz (+/- 2 Hz)
	Power consumption	Printing = 400 W Standby = 25 W (26 W for CLJ 3500n printers) Off = 0.25 W	Printing = 400 W Standby = 25 W (26 W for CLJ 3500n printers) Off = 0.25 W
	Minimum recommended circuit capacity (for a typical product)	5.3 Amps	3 Amps
CLJ 3700	Power requirement	100 to 127 V (+/-10%) 50 to 60 Hz (+/- 2 Hz)	220 to 240 V (+/-10%) 50 to 60 Hz (+/- 2 Hz)
	Power consumption	Printing = 400 W Standby = 26 W Off = 0.25 W	Printing = 400 W Standby = 26 W Off = 0.25 W
	Minimum recommended circuit capacity (for a typical product)	5.3 Amps	3 Amps

Table 2-3 Electrical specifications

Product	Item	110-volt models	220-volt models
CLJ 4500 CLJ 4550	Power requirement	100 to 127 V (+/- 10%) 50/60 Hz (+/- 2Hz)	220 to 240 V (+/- 10%) 50/60 Hz (+/- 2 Hz)
	Power consumption	Printing = 470 W Standby = 80 W PowerSave = < 45 W	Printing = 480 W Standby = 90 W PowerSave = < 45 W
	Minimum recommended circuit capacity (for a typical product)	16.0 Amps at 120 V	7.1 Amps at 220 V
CLJ 4600	Power requirement	100 to 127 V (+/- 10%) 50/60 Hz (+/- 2Hz)	220 to 240 V (+/- 10%) 50/60 Hz (+/- 2 Hz)
	Power consumption	Printing = 426 W Standby = 34 W PowerSave = 30 W Off = 0 W	Printing = 430 W Standby = 36 W PowerSave = 32 W Off = 0 W
	Minimum recommended circuit capacity (for a typical product)	6 Amps	3 Amps
CLJ 5500	Power requirement	100 to 127 V (+/- 10%) 50/60 Hz (+/- 2Hz)	220 to 240 V (+/- 10%) 50/60 Hz (+/- 2 Hz)
	Power consumption	Printing = 592 W Standby = 54 W PowerSave = 48 W Off = 0 W	Printing = 562 W Standby = 51 W PowerSave = 44 W Off = 0 W
	Minimum recommended circuit capacity (for a typical product)	6 Amps	3 Amps

Table 2-3 Electrical specifications

Product	Item	110-volt models	220-volt models
CLJ 8500 CLJ 8550	Power requirement	100 to 127 V (+/- 10%) 50/60 Hz (+/- 2Hz)	220 to 240 V (+/- 10%) 50/60 Hz (+/- 2 Hz)
	Power consumption	Printing color = 375 W Printing b/w = 750 W Standby = 190 W PowerSave = < 45 W Off = < 2 W	Printing color = 375 W Printing b/w = 750 W Standby = 190 W PowerSave = < 45 W Off = < 2 W
	Minimum recommended circuit capacity (for a typical product)	12 Amps at 120 V	6 Amps at 220V
CLJ 9500	Power requirement	100 to 127 V (+/- 10%) 50 to 60 Hz (+/- 2 Hz)	220 to 240 V (+/- 10%) 50 to 60 Hz (+/- 2 Hz)
	Power consumption	Printing = 722 W (CLJ 9500n) or 741 W (CLJ 9500hdn) Standby = 171 W (CLJ 9500n) or 173 (CLJ 9500hdn) Low PowerSave (ENERGY STAR®) = 69 W High PowerSave (Blue Angel) = 32 W Off = <2	Printing = 722 W (CLJ 9500n) or 741 W (CLJ 9500hdn) Standby = 171 W (CLJ 9500n) or 173 (CLJ 9500hdn) Low PowerSave (ENERGY STAR®) = 69 W High PowerSave (Blue Angel) = 32 W Off = <2
	Minimum recommended circuit capacity (for a typical product)	15.0 Amps (dedicated circuit)	10.0 Amps (dedicated circuit)

Printing information pages

Note

You can also gain access to information pages for the CLJ 2500, CLJ 4600, and CLJ 5500 through the embedded Web server. For information about using the embedded Web server, see the *HP Embedded Web Server for HP LaserJet Printers and MFPs* manual.

Configuration page

Use the configuration page to view current printer settings and properties, to help troubleshoot printer problems, or to verify installation of optional accessories, such as memory (DIMMs), paper trays, and printer languages. The following sections are included on the configuration page of most printers:

- **Printer Information**. Contains basic information about the printer, such as the product name, printer name, and page count.
- **Configuration menu**. Lists the current settings of the configuration menu items.
- **Event Log**. Contains information about printer errors.
- **Usage information**. Contains the number and types of pages printed
- **Installed personalities and options**. This section contains information about optional items that might be installed, such as DIMMs or an HP Jetdirect print server card.
- **Memory**. Lists memory-related information, such as the total memory installed.
- **Security**. Contains information about security features, such as whether the printer control-panel password is enabled or disabled.
- **Paper Tray Information**. Contains information about the trays, such as whether optional trays are installed and the type and size of paper that might be set for each tray.
- **I/O menu**. Lists the current settings of the I/O menu items.
- **Calibration density settings**. (CLJ 4500 and CLJ 4550 only) Contains, on the bottom row of text, four separate blocks of numbers. The first block is for cyan, second for magenta, third for yellow, and the last is for black. If the numbers are near zero, no calibration was done.
- **Consumables: % of Life Remaining**. (CLJ 8500 and CLJ 8550 only) Lists the percentage of the maximum rated life remaining for the transfer kit, fuser kit, and drum kit.

- **Color Adjust**. (CLJ 8500 and CLJ 8550 only) Lists the number of pages that have been printed since the last manual color adjustment.

To print a configuration page

Table 2-4 Printing a configuration page

Product	Instructions
CLJ 2500	Press GO and CANCEL JOB simultaneously. (The supplies status page also prints. If you have an HP Jetdirect print server card installed, the HP Jetdirect page also prints.) **Note** You can also print a configuration page in the embedded Web server, or from the HP Color LaserJet 2500 Series Toolbox
CLJ 3500 CLJ 3700 CLJ 4600 CLJ 5500	**1** Press SELECT to open the MENUS. **2** Press the DOWN ARROW to highlight INFORMATION. **3** Press SELECT to select INFORMATION. **4** Press the DOWN ARROW to highlight PRINT CONFIGURATION. **5** Press SELECT to select PRINT CONFIGURATION. The message PRINTING... CONFIGURATION appears on the display until the printer finishes printing the configuration page. The printer returns to the READY state after printing the configuration page. **Note** If the printer is configured with EIO cards (for example, an HP Jetdirect Print Server) or an optional hard-disk drive, an additional configuration page will print that provides interface configuration information.
CLJ 4500 CLJ 4550	**1** Press MENU until INFORMATION MENU appears on the printer control-panel display. **2** Press ITEM until PRINT CONFIGURATION appears on the display. **3** Press SELECT to print the configuration page. **Note** If the printer is configured with EIO cards (for example, an HP JetDirect Print Server), an additional configuration page will print that provides interface configuration information.

Table 2-4 Printing a configuration page

Product	Instructions
CLJ 8500 CLJ 8550	**1** Press MENU until INFORMATION MENU appears on the printer control-panel display. **2** Press ITEM until PRINT CONFIG PAGE appears on the display. **3** Press SELECT to print the page.
	To print a continuous configuration page: **1** Press MENU until INFORMATION MENU appears on the printer control-panel display. **2** Press ITEM until PRINT CONTINUOUS CONFIG PAGES appears on the display. **3** Press SELECT to print the page. **Note** Press CANCEL JOB to stop printing. The printer will print all of the pages in the buffer before stopping.
CLJ 9500	**1** Press SELECT to open the menus. **2** Use UP or DOWN to scroll to Information Menu, and then press SELECT. **3** Use UP or DOWN to scroll to Print Configuration, and then press SELECT. The configuration page prints. The HP Jetdirect network configuration page also prints. **4** Press PAUSE/RESUME to close the menus. Shortcut method: Press 2, and then press 2 again on the printer control panel.

Demonstration page

Use this page to simulate printing a color image. If the image print quality is poor, print a demonstration page to make sure that the problem is not related to software, communications, or file quality.

To print a demonstration page

Table 2-5 Printing a demonstration page

Product	Instructions
CLJ 2500	Press GO when the printer is Ready (Ready light on) and is not printing. You can also view this page from the HP Color LaserJet 2500 Series Toolbox.
CLJ 3500 CLJ 3700 CLJ 4600 CLJ 5500	**1** Press SELECT to enter the MENUS. **2** Press the DOWN ARROW to highlight INFORMATION. **3** Press SELECT to select INFORMATION. **4** Press the DOWN ARROW to highlight PRINT DEMO. **5** Press SELECT to select PRINT DEMO.
CLJ 4500 CLJ 4550	**1** Press MENU until INFORMATION MENU appears on the printer control-panel display. **2** Press ITEM until PRINT LASERJET DEMO appears on the display. **3** Press SELECT to print the demonstration page.
CLJ 8500 CLJ 8550	**1** Press MENU until INFORMATION MENU appears on the printer control-panel display. **2** Press ITEM until PRINT LASERJET DEMONSTRATION appears on the display. **3** Press SELECT to print the page.
CLJ 9500	**1** Press SELECT to open the menus. **2** Use UP or DOWN to scroll to Information Menu, and then press SELECT. **3** Use UP or DOWN to scroll to Print Demo, and then press Select. **4** Press PAUSE/RESUME to close the menus.

Menu map

Use the menu map to navigate through control-panel menus.

To print a menu map

Table 2-6 Printing a menu map

Product	Instructions
CLJ 2500	The CLJ 2500 does not have a control-panel display. **Note** For information about menu items in the embedded Web server, see the *HP Embedded Web Server for HP LaserJet Printers and MFPs* manual.
CLJ 3500 CLJ 3700	**1** Press MENU to enter the MENUS. **2** Press the DOWN ARROW to highlight INFORMATION. **3** Press SELECT to select INFORMATION. **4** Press the DOWN ARROW to highlight PRINT MENU MAP. **5** Press SELECT to select PRINT MENU MAP.
CLJ 4500 CLJ 4550	**1** Press MENU until INFORMATION MENU appears on the printer control-panel display. **2** Press ITEM until PRINT MENU MAP appears on the display. **3** Press SELECT to print the menu map.
CLJ 4600 CLJ 5500	**1** Press SELECT to enter the MENUS. **2** Press the DOWN ARROW to highlight INFORMATION. **3** Press the DOWN ARROW to highlight PRINT MENU MAP. **4** Press SELECT to select PRINT MENU MAP.
CLJ 8500 CLJ 8550	**1** Press MENU to cycle through the printer control-panel menus. **2** From the Information Menu, select PRINT MENU MAP. **3** Press SELECT to print the menu map.
CLJ 9500	**1** Press SELECT to open the menus. **2** Use UP or DOWN to scroll to Information Menu, and then press SELECT. **3** Use UP or DOWN to scroll to Print Menu Map, and then press SELECT. **4** Press PAUSE/RESUME to close the menus.

Event log

The event log lists the printer events, including printer jams, service errors, and other printer conditions.

To print an event log

Table 2-7 Printing an event log

Product	Instructions
CLJ 2500	The last three events appear on the configuration page. For a full list of events, see the HP Color LaserJet 2500 Toolbox, (click the **Device** tab, and then click **Information**.)
CLJ 3500 CLJ 3700 CLJ 4600 CLJ 5500	**1** Press SELECT to open the MENUS. **2** Press the DOWN ARROW to highlight DIAGNOSTICS. **3** Press SELECT to select DIAGNOSTICS. **4** Press the DOWN ARROW to highlight PRINT EVENT LOG. **5** Press SELECT to select PRINT EVENT LOG.
CLJ 4500 CLJ 4550	**1** Press MENU until INFORMATION MENU appears on the printer control-panel display. **2** Press ITEM until SHOW EVENT LOG appears on the display. **3** Press SELECT to print the event log.
CLJ 8500 CLJ 8550	**1** Press MENU to cycle through the printer control-panel menus. **2** From the Information Menu, select PRINT EVENT LOG. **3** Press SELECT to print the event log.
CLJ 9500	**1** Press SELECT to open the menus. **2** Use UP or DOWN to scroll to Diagnostics, and then press (Select). **3** Use UP or DOWN to scroll to Print Event Log, and then press (Select).

Supplies status page

The supplies status page lists the remaining life of HP print cartridges and HP imaging drums. It also lists the estimated number of pages that can be printed with the remaining supplies, number of pages printed, and other supplies information. The following information is included on the supply status page of most printers:

- **Ordering Information.** Contains basic information about how to order new HP supplies.
- **Print-cartridge.** Contains a section for each of the print cartridges and provides information about HP print cartridges. This information includes the part number for each print cartridge, the toner level in each print cartridge, and the life remaining for each print cartridge.
- **Recycling Information.** Contains information about the Web site that you can visit for information about recycling.
- **Imaging-drum area.** Contains the same information for the imaging drum that the print-cartridge area provides for the print cartridges.
- **Warranty Note.** Contains information about how the printer warranty is affected when you use non-HP supplies. It also requests that you call the HP fraud hotline if a supply that is being detected as a non-HP supply was sold as a genuine HP supply.

To print a supplies status page

Table 2-8 Printing a supplies status page

Product	Instructions
CLJ 2500	Press GO and CANCEL JOB simultaneously. (The configuration page also prints. If you have an HP Jetdirect print server card installed, the HP Jetdirect page also prints.) **Note** You can also print a configuration page in the embedded Web server, or from the HP Color LaserJet 2500 Series Toolbox
CLJ 3500 CLJ 3700 CLJ 4600 CLJ 5500	**1** Press SELECT to enter the MENUS. **2** Press the DOWN ARROW to highlight INFORMATION. **3** Press SELECT to select INFORMATION. **4** Press the DOWN ARROW to highlight SUPPLIES STATUS. **5** Press SELECT to select PRINT SUPLIES STATUS.

Table 2-8 Printing a supplies status page (continued)

Product	Instructions
CLJ 4500 CLJ 4550	**1** Press MENU until INFORMATION MENU appears on the printer control-panel display. **2** Press ITEM until SHOW EVENT LOG appears on the display. **3** Press SELECT to print the event log.
CLJ 8500 CLJ 8550	The CLJ 8500/8550 do not support a supplies status page. For information about the percentage of consumables remaining, print a configuration page.
CLJ 9500	**1** Press SELECT to open the menus. **2** Use UP or DOWN to scroll to Information Menu, and then press SELECT. **3** Use UP or DOWN to scroll to Print Supplies Status, and then press SELECT. **4** Press PAUSE/RESUME to close the menus.

Troubleshooting by using control-panel messages

This section provides a list of control-panel messages for the CLJ 2500. Alphabetical error messages are listed first, on page 53, followed by numerical messages on page 109. Control-panel messages that are self-explanatory are not included. See the service manual for more detailed information.

CLJ 2500 control-panel light messages

The following section describes the meaning of the light patterns in the Printer Status area. Information about the printer status also appears in the Printer Status and Alerts software and the embedded Web server.

Several errors have secondary light patterns, which provide more information about the specific type of error that occurred.The following errors types have secondary light patterns:

- Attention with Ability to Continue errors (see page 44)
- Accessory errors (see page 47)
- Service errors (see page 50)

Control-panel lights

Use the following legend to read the light messages in Table 2-10, “Printer Status light messages for CLJ 2500.”

Table 2-9 Control-panel lights (CLJ 2500)

Light	Description
	Light is off.
	Attention light (amber) is on.
	Attention light (amber) is blinking.
	Ready light (green) is on. Go light (green) is on.
	Ready light (green) is blinking. Go light (green) is blinking.

Table 2-10 Printer Status light messages (CLJ 2500)

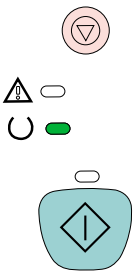
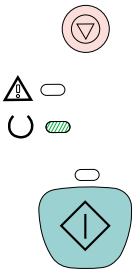
Message	Description	Solution
All control-panel lights cycle one after another.	The printer is in Startup state.	Pressing buttons has no effect until the printer is in the Ready state.
	The printer is in Ready state.	• No action is needed. • Pressing GO prints a Demo page. • Pressing GO and CANCEL JOB simultaneously prints a configuration page and a supplies status page, as well as an HP Jetdirect page if an HP Jetdirect print server card is installed.
	The printer is receiving or processing data.	Pressing CANCEL JOB cancels the current job. One or two pages might print as the printer clears the print job. The printer returns to the Ready state (Ready light on) after the job has been canceled.

Table 2-10 Printer Status light messages (CLJ 2500) (continued)

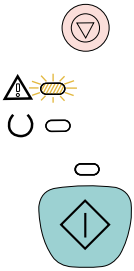
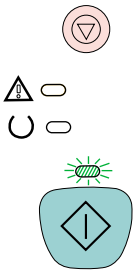
Message	Description	Solution
	**Attention error.** The top cover is open.	Close the top cover.
	Attention error. The printer is out of media.	Load media.
	Attention error. The printer has a jam.	**1** Clear the jam (see pages See “CLJ 2500 jams” on page 293). **2** If the location of the jam is not apparent, check the embedded Web server to find the jam location. ◆ If the jam was under the imaging drum, toggle the registration sensor to check its movement and replace the registration sensor if it does not move freely. ◆ If the jam was in the fuser area, toggle the fuser exit sensor to check its movement and replace the fuser exit sensor if it does not move freely.
	● The top cover has been opened and then closed ● You pressed ROTATE CAROUSEL.	● Pressing GO returns the printer to the Ready state. If you do not press GO, the printer automatically returns to the Ready state after approximately 10 seconds. ● Pressing ROTATE CAROUSEL brings another print cartridge to the top position.

Table 2-10 Printer Status light messages (CLJ 2500) (continued)

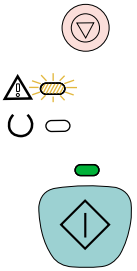
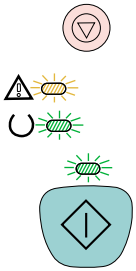
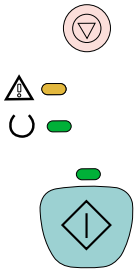
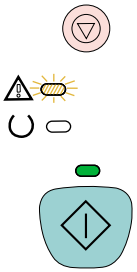
Message	Description	Solution
	A manual-feed job was sent to the printer, and the printer is waiting for the special media.	**1** Load media into tray 1. **2** If the printer does not begin printing after the pages have been reloaded, press GO. Or, just press GO to try to print from another tray if another tray is installed.
	The printer has finished printing the first side of a manual-duplex job, and the printer is waiting for the pages to be reloaded so it can print the second side.	**1** Reload the pages. **2** If the printer does not begin printing after the pages have been reloaded, press GO.
	Someone is trying to print by Source (tray) and there is no paper in the selected tray.	● Add paper to the selected tray to print from it. ● Press GO to try to print from another tray.
	The print image is larger than the size of media in the tray.	Load the correct-size media and press GO.
	The printer has an Attention with Ability to Continue error.	**1** Press GO for the printer to attempt to recover from the error and print whatever data it can. If successful, the printer completes the job while the Ready light blinks. **2** If unsuccessful, the Attention with Ability to Continue message continues to appear. Perform one of these steps: ◆ Press and hold GO and CANCEL JOB simultaneously to see a secondary light pattern. (See "Attention with Ability to Continue secondary messages (CLJ 2500)" on page 44.) ◆ Press CANCEL JOB to cancel the print job. If the problem has been resolved, the printer returns to the Ready state (Ready light on)

Table 2-10 Printer Status light messages (CLJ 2500) (continued)

Message	Description	Solution
	**Accessory error.** An error has occurred with either the EIO port or a DIMM slot. (The printer stops printing, and pressing any button has no effect.)	Press and hold GO and CANCEL JOB simultaneously to see a secondary light pattern. (See “Accessory error secondary messages (CLJ 2500)” on page 47.)
	**Service error.** (The printer stops printing, and pressing any button has no effect.)	**1** If the printer is connected to a power strip or surge protector, disconnect it and connect the power cable directly to a working wall outlet. **2** Turn the printer off and then on. If the problem persists, leave the printer off for 15 minutes to reset the printer. **3** If the problem continues, press and hold GO and CANCEL JOB simultaneously to see a secondary light pattern. (See “Service error secondary messages (CLJ 2500)” on page 50.)

Attention with Ability to Continue secondary messages (CLJ 2500)



If the printer has an Attention with Ability to Continue error (the Attention light is blinking and the Go light is on), press and hold GO and CANCEL JOB simultaneously to see the secondary error message.

You can also view the embedded Web server, which provides a text message that corresponds to the error and its secondary light pattern.

Table 2-11 Attention secondary messages (CLJ 2500)

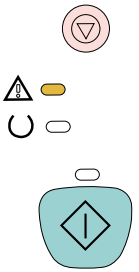
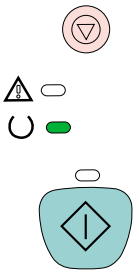
Message	Description	Solution
	**20 Insufficient Memory error**	The printer memory is full. Press GO to resume printing. If you lose some data, try to free some printer memory by removing any unnecessary fonts, macros, or any data currently in printer memory. If you continue to lose data, you might need to add more printer memory. For a temporary solution, simplify the image.
	**41.3 Unexpected Size error or 41.x Printer error**	**1** Load the correct size of media. If the correct size is loaded, press GO. **2** If printing does not resume, open the top cover, remove the imaging drum, and check for a jam inside the printer.

Table 2-11 Attention secondary messages (CLJ 2500) (continued)

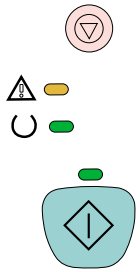
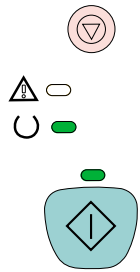
	**40 Bad Transmission error**	**1** Press Go to try to print a portion of the job. **2** If the printer is connected to the network, make sure that the cable is securely connected between the HP Jetdirect print server card and the network port. **3** If the printer is directly connected to a computer, the cable between the printer and computer has a bad connection or the cable is of poor quality. Disconnect the cable and reconnect it. Make sure that you are using a high-quality USB or IEEE-1284 compliant, size-B parallel cable. **4** If the error persists, replace the appropriate cable.
	**22 Buffer Overflow error**	**1** Press Go to try to print a portion of the job. **2** The connection between the printer and the computer might be loose. Turn the printer off and check the cable connection to make sure that it is secure. **3** The cable is malfunctioning. Try using a different, high-quality USB or IEEE-1284 compliant, size-B parallel cable. **4** If the error persists, reduce the complexity of the print job, and try again to print.

Table 2-11 Attention secondary messages (CLJ 2500) (continued)

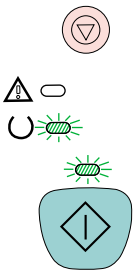
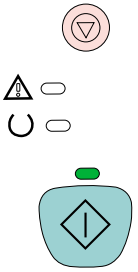
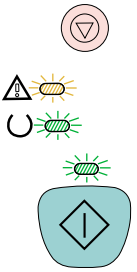
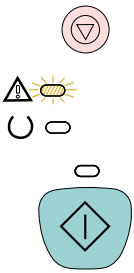
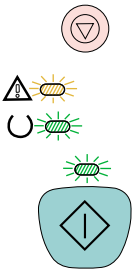
	**Chosen Personality Not Available error** The current job was canceled because the printer language (personality) is not supported.	**1** Press Go to clear the message. **2** If you printed the job using one of the PCL drivers, try printing using the PS driver, or vice versa. **3** Turn off the printer and remove or replace the language font DIMM. **CAUTION** You must turn off the printer before inserting or removing DIMMs.
	**Data Received error** The printer received data and is waiting for a form feed.	Press Go to print the last page. Sending another print job can also cause the page to print.
	**General Attention with Ability to Continue error**	Press Go to try to continue printing. If the error persists, switch printer drivers and try again to print.

Table 2-11 Attention secondary messages (CLJ 2500) (continued)

	**68.x Permanent Storage error** The nonvolatile memory (NVRAM) is temporarily full.	Press GO to clear the message. Check the printer settings. Remove the Jetdirect card, if it is installed, and then perform a cold reset (see page 264). Perform a NVRAM init (see page 258).

Accessory error secondary messages (CLJ 2500)



If the printer has an Accessory error (the Attention light, Ready light, and Go light are blinking), press and hold GO and CANCEL JOB simultaneously to see the secondary error message.

You can also view the embedded Web server, which provides a text message that corresponds to the error and its secondary light pattern.

Table 1. Accessory error secondary messages (CLJ 2500)

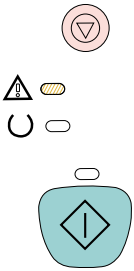
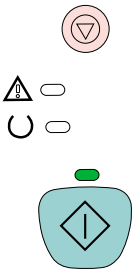
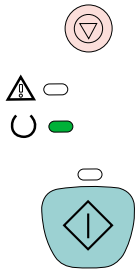
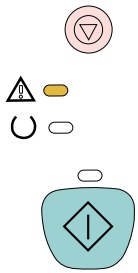
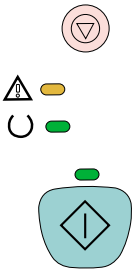
Message	Description	Solution
	**8x.yyyy EIO error** A problem exists with the print server card. **CAUTION** You must turn off the printer before inserting or removing the print server card to avoid damaging the print server card.	**1** Remove the print server card and reinstall it to make sure that it is correctly installed. **2** Make sure that a supported print server card. is installed **3** To continue printing, remove the print server card from the EIO port and connect a parallel or USB cable. You must change the port or reinstall the software. **4** If the print server card still is not working, replace the print server.
	**53.x1.zz Printer (DIMM Slot 1) error** A problem exists with the DIMM in DIMM slot 1. **CAUTION** You must turn off the printer before inserting or removing DIMMs to avoid damaging them.	**1** Remove the DIMM and reinstall it to make sure that it is correctly installed. **2** Make sure that a supported DIMM is installed. **3** Move the DIMM to a different DIMM slot. If the DIMM works in a different slot, then DIMM slot 1 is malfunctioning. **4** Many of the first printers of this model were shipped with an 8 MB flash DIMM in DIMM slot 1. If the printer has an 8 MB flash DIMM in DIMM slot 1, then replace the DIMM. The 8 MB flash DIMM will not work in any DIMM slot other than DIMM slot 1. **5** To continue printing, remove the DIMM from DIMM slot 1.

Table 1. Accessory error secondary messages (CLJ 2500) (continued)

	**53.x2.zz Printer (DIMM Slot 2) error** A problem exists with the DIMM in DIMM slot 2. **CAUTION** You must turn off the printer before inserting or removing DIMMs to avoid damaging them.	**1** Remove the DIMM and reinstall it to make sure that it is correctly installed. **2** Make sure that a supported DIMM is installed. **3** Move the DIMM to a different DIMM slot. If the DIMM works in a different slot, then DIMM slot 2 is malfunctioning. **4** To continue printing, remove the DIMM from DIMM slot 2.
	**53.x3.zz Printer (DIMM Slot 3) error** A problem exists with the DIMM in DIMM slot 3. **CAUTION** You must turn off the printer before inserting or removing DIMMs to avoid damaging them.	**1** Remove the DIMM and reinstall it to make sure that it is correctly installed. **2** Make sure that a supported DIMM is installed. **3** Move the DIMM to a different DIMM slot. If the DIMM works in a different slot, then DIMM slot 3 is malfunctioning. **4** To continue printing, remove the DIMM from DIMM slot 3.

Service error secondary messages (CLJ 2500)



If the printer has a service error (Attention light, Ready light, and Go light are on), press and hold GO and CANCEL JOB simultaneously to see the secondary error message.

You can also view the embedded Web server, which provides a text message that corresponds to the error and its secondary light pattern.

Table 2-12 Service error secondary messages (CLJ 2500)

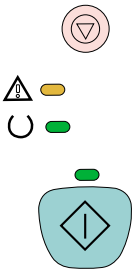
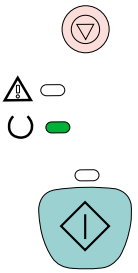
Message	Description	Solution
	**51.x Bad beam detect error**	**1** Press GO. The page that contains the error will automatically be reprinted. **2** Turn the printer off and then on. **3** Replace the laser/scanner.
	**52.x Scanner error**	**1** Press GO. The page that contains the error will automatically be reprinted. **2** Turn the printer off and then on. **3** Turn the printer off, and then reseat the laser/scanner cable. **4** Replace the laser/scanner.

Table 2-12 Service error secondary messages (CLJ 2500) (continued)

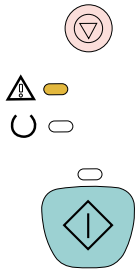
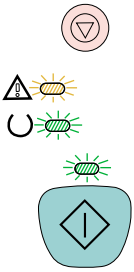
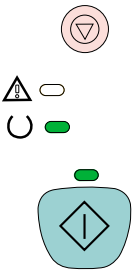
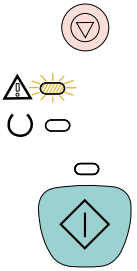
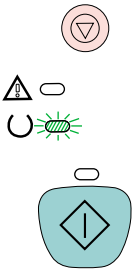
	**55.x Engine communication error**	**1** Turn the printer off and then on. **2** Check the connections to the formatter and the dc controller. **3** Replace the formatter. **4** Replace the dc controller. **5** Replace the laser/scanner.
	**49.xxxxx Formatter/engine error** (The control-panel lights are blinking, *or* the magenta-print-cartridge, yellow-print-cartridge, and imaging-drum lights are on.)	**1** Turn the printer off and then on. **2** Replace the formatter.
	**50.X Fuser error**	**1** Turn the printer off for approximately 20 to 30 minutes, and then turn the printer on. **2** If the error persists, replace the fuser.

Table 2-12 Service error secondary messages (CLJ 2500) (continued)

	**57.x Fan motor error**	**1** Turn the printer off and then on. **2** Turn the printer off, and then reseat the cable that connects the fan and the formatter. **3** Replace the fan. **4** Replace the dc controller.
	**64 Scan buffer error**	**1** Turn the printer off and then on. **2** Replace the formatter.

Alphabetical printer messages

The following table contains the alphabetical error messages for all of the printer models that are covered in this guide. Because different models require different procedures, make sure that you find the exact wording of the error message on the control-panel display. Model numbers are not specified for every message in the table.

Note

Self-explanatory messages are not included.

Table 2-13 Alphabetical printer messages

Message	Description	Action
ACCESS DENIED MENUS LOCKED	A user has attempted to select a menu value while the printer control panel is locked.	Contact the printer administrator to gain access to the control panel.
BAD DUPLEXER CONNECTION	The duplexer is not correctly installed.	**1** Turn the printer off and remove the duplexer. **2** Make sure that the duplexer is the correct duplexer for the printer. **3** Turn the printer on and check for other error messages. **4** Check the electrical contacts on the duplexer and on the printer for damage or obstructions. **5** Turn the printer off. **6** Reinstall the duplexer and then turn the printer on again. **7** If the error persists, check the connections to the DC controller PCA, low-voltage power supply, and high-voltage power supply as appropriate. **8** Replace the duplexer.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
CANNOT DUPLEX CLOSE REAR BIN	The printer cannot duplex because the rear output bin is open.	**1** Close the rear output bin door. **2** If the error message persists, turn the printer off and then on.
CANNOT DUPLEX CHECK REAR BIN alternates with CANNOT DUPLEX CHECK PAPER	The printer cannot duplex because the rear output bin is open or the duplexer.	**1** Close the rear output bin. **2** If the error message persists, turn the printer off and then on. Verify that the duplexer supports the media. See "Supported media weights and sizes" in the appropriate service manual.
CHECK CONTROL PANEL SETTINGS	The page might not be printing because the control-panel setting for the media type or size does not match the media in the tray.	See the appropriate service manual for information about configuring the media type and size for each tray.
CHECK TRAY 1 PAPER GUIDES	The width of the paper guides does not match the size of the media selected for the print job.	Adjust the paper-width guides to the edge of the page. Make sure that the media size selected for the print job is the same as the size of media loaded in tray 1.
CHOSEN PERSONALITY NOT AVAILABLE FOR HELP PRESS ? alternates with CHOSEN PERSONALITY NOT AVAILABLE TO CONTINUE PRESS ✓	A print job requested a printer language (personality) that is not available with this printer. The job is not printed and is cleared from memory.	• If available, press HELP for detailed information, and then use the UP ARROW and DOWN ARROW to step through the instructions. -Or- • Print the job by using a printer driver for a different printer language, or add the requested language to the printer (if available).

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
CLEAN POST CHARGER (CLJ 9500)	• The post charger requires cleaning. • This warning message is prompted when the replace black cartridge message is cleared and the black cartridge count is reset. Printing should continue when this message appears. • When the user opens the upper right door or cycles power when this message appears, the control panel should pop to the menu item charger cleaneD in the resets submenu.	**1** Clean the post charger (see the service manual for instructions). **2** Select YES when prompted about having cleaned the post charger.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
CLEAR DUPLEX JAM LOWER LEFT DOOR	The printer senses a jam in the duplexer.	**1** Open the left lower cover, remove the duplexer, remove the jammed media, reinstall the duplexer, and close the left lower cover. **2** The fusing assembly and diverter assemblies can also cause duplex printing problems. Verify that they are operating correctly. **3** Open the left lower cover and defeat the delivery cover interlock. Toggle the sensors at the paper exit and entrance. While running the sensor monitor test from the Service Mode Menu, verify that sensors 8 and 9 on the printer control panel indicate 1 (on) when toggled. **Note** This procedure will not work if the left lower cover interlock is not defeated. **4** If the error message persists, replace the duplexer.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
CLEAR FUSER JAM LOWER LEFT DOOR	The printer senses a jam in the fuser area. The printer expected a page to come through the fuser, but the paper has not toggled PS1903, or PS1903 has been toggled an extended period of time.	**WARNING!** Do not touch the fuser; it could be very hot and could cause burns. **1** Open the left lower cover, remove the jammed media, and close the left lower cover. **2** On the left side of the fuser, check the fuser exit flag and the reflective absorptive sticker that the sensor (PS1903) uses. **3** Perform the sensor monitor test in the Service Mode Menu. Toggle PS1903 and check to make sure that sensor 2 on the printer control panel indicates 1 (on) when toggled.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
CLEAR INPUT DEVICE JAM Check the event log message. These instructions are for event log message 13.11.1<X>.	There is a jam in the 2,000-sheet input tray. Event log message: 13.11.1<x> <x> Description: 1 Timeout at the paper entry sensor (PS31) B Timeout at the paper exit sensor (PS32)	**1** Open the vertical transfer unit (VTU) and remove any media. **2** Verify that the paper entry sensor (PS31) moves freely. **3** Verify that the feed, separation, and pickup rollers are correctly seated. **4** If the problem persists, open the VTU and override the VTU closed sensor (PS35). Perform a paper-path test from the 2,000-sheet input unit, and verify that the feed rollers are advancing the paper. If the rollers do not rotate, check the connections at the pickup assembly and the controller PCA in the 2,000-sheet input unit. **5** If the rollers rotate and drop down but do not advance the paper, replace the feed and separation rollers by using the maintenance kit. **6** If the rollers do not rotate or do not drop down, replace the pickup assembly. **7** If the problem persists, replace the VTU, which includes PS31.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
CLEAR INPUT DEVICE JAM Check the event log message. These instructions are for event log message 13.11.2<X>.	There is a jam in the 2,000-sheet input tray. Event log message: 13.11.2<x> X description 1 Page stays too long at the paper entry sensor (PS31) B Page stays too long at the paper exit sensor (PS32)	**1** Open the VTU and remove any media. **2** Verify that the paper entry sensor (PS31) moves freely. **3** Verify that the feed, separation, and pickup rollers are correctly seated. **4** If the problem persists, open the VTU and override the VTU closed sensor (PS35). Perform a paper path test from the 2,000-sheet input unit, and verify that the feed rollers are advancing the paper. If the rollers do not rotate, check the connections at the pickup assembly and the controller PCA in the 2,000-sheet input unit. **5** If the rollers rotate and drop down but do not advance the paper, replace the feed and separation rollers by using the maintenance kit. **6** If the rollers do not rotate or do not drop down, replace the pickup assembly. **7** If the problem persists, replace the VTU, which includes PS31.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
CLEAR INPUT DEVICE JAM Check the event log message. These instructions are for event log message 13.11.3<X>.	There is a jam in the 2,000-sheet input tray. Event log message: 13.11.3<x> X description 1 At power on, the paper entry sensor (PS31) in the VTU is active B At power on, the paper exit sensor (PS32) in the VTU is active	**1** Open the vertical transfer unit (VTU) and remove any media. **2** Verify that PS31 and PS32 in the VTU move freely. **3** If either PS31 or PS32 is damaged, replace the VTU.
CLEAR INPUT JAM	The printer senses a jam in the transfer or registration area, in an input tray, or in the duplexer.	**1** Open the front door, press the white button on the lower (green) lever, and swing the lever to the right. Open the right upper door, remove the transfer drum, and remove the jammed media from under the metal paper guide. Reinstall the transfer drum, and close the right upper door. Swing the lower (green) lever to the left, and close the front door. **2** Open each input tray, remove any jammed media, and close the input tray. **3** Open the left lower cover, remove the duplexer, remove the jammed media, reinstall the duplexer, and close the left lower cover. **4** Check the entire paper path for media.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
CLEAR MAILBOX JAM Check the event log message. These instructions are for event log messages 13.22.01 and 13.22.02.	The printer senses a jam in the multi-bin mailbox. Event log message: 13.22.01, 13.22.02	**1** Open the jam access door and remove any media. **2** Verify that the left (face-up) output-bin-full sensor (PSFaceFull) flag moves freely. **3** Verify that the flipper shaft is in place. **4** If the message persists, replace the flipper assembly. **5** If the message persists, replace the multi-bin mailbox controller board PCA.
CLEAR MAILBOX JAM Check the event log message. These instructions are for event log message 13.22.03.	The printer senses a jam in the multi-bin mailbox. Event log message: 13.22.03	**1** Check for a jam at the double-belt system and delivery head assembly. **2** Ensure free movement of the double belt (both belts). **3** Ensure parallel position of the double belt system. **4** Verify that the metallic tape is in place and in good condition. **5** If the message persists, replace the transport belt motor (M5). **6** If the message persists, replace the multi-bin mailbox controller board PCA. **7** If the message persists, replace the delivery head assembly.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
CLEAR MAILBOX JAM Check the event log message. These instructions are for event log message 13.22.04.	The printer senses a jam in the multi-bin mailbox. Event log message: 13.22.04	**1** Check for a jam in the delivery head assembly. **2** Ensure free movement in the sensor flags (PSExit1) on the delivery head assembly. **3** Verify that the delivery roller fingers are over the ejector rollers on the delivery head assembly. **4** If the message persists, replace the flat ribbon cable that connects to the delivery head assembly to the controller board PCA. **5** If the message persists, replace the multi-bin mailbox controller board PCA. **6** If the message persists, replace the delivery head assembly.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
CLEAR MAILBOX JAM Check the event log message. These instructions are for event log message 13.22.05.	The printer senses a jam in the multi-bin mailbox. Event log message: 13.22.05	**1** Check for a jam in the delivery head assembly. **2** Ensure free movement in the sensor flags (PSExit2) on the delivery head assembly. **3** Verify that the delivery roller fingers are over the ejector rollers on the delivery head assembly. **4** If the message persists, replace the flat ribbon cable that connects to the delivery head assembly to the controller board PCA. **5** If the message persists, replace the multi-bin mailbox controller board PCA. **6** If the message persists, replace the delivery head assembly.
CLEAR OUTPUT JAM UPPER LEFT DOOR	The printer senses a jam in the top (face-down) output bin. This message might be caused by the paper not reaching PS11 or by the paper toggling PS11 for an extended period of time.	**1** Open the left upper door, remove the jammed media, and close the left upper door. **2** Verify that PS30, PS10, PS11, and PS3 sensors and the surrounding area are clean. **3** Perform the sensor monitor test in the Service Mode Menu to verify that all paper-path sensors are functioning correctly or to locate the jam.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
CLEAR PAPER JAM	The printer senses a jam. Because this is a generic jam message, the jam might be at any point in the paper path.	**1** Open and shut the front door of the printer to clear any media from the printer. Be sure to check the fuser area because media can get wrapped around the fuser and be difficult to find. **2** Check all areas of the printer for jammed media, because the printer is unable to determine the location of the jam **3** Perform the sensor monitor test in the Service Mode Menu to verify that all paper-path sensors are functioning correctly or to locate the jam.
CLEAR TRANSFER JAM	The printer senses a jam in the transfer drum area when media has not reached PS5. In some cases the media might wrap around the transfer drum and become lodged near the imaging drum.	Open the right upper door, remove the transfer drum, remove the jammed media, reinstall the transfer drum, and close the right upper door.
CLEAR TRAY 4 JAM	The printer senses a jam in tray 4.	Open tray 4 and the vertical transfer unit (VTU), remove the jammed media, and close the tray and the VTU. **Note** Most transfer jams for the CLJ 8500/8550 are related to media or environment.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
CLEAR UNEXPECTED PAPER SIZE JAM THEN LOAD TRAY 1 <TYPE> <SIZE>	The printer senses a jam in tray 1, or the media is longer than what was expected. <type> = Media type specified in the printer driver or program <size> = Media size specified in the printer driver or program The <type> and <size> can be the default media type and size if an automatic paper override has occurred or if GO was pressed during a mount request.	**1** Open the right upper door and remove the jammed media. **2** Load the media type and size indicated on the printer control panel.
CLEARING PAPER FROM PRINTER	The printer is attempting to remove unusable media (such as a misfed page or jam).	No action is required.
CLOSE <LOCATION> DOOR	The printer senses that one of the doors is not closed correctly.	**1** Close the door indicated in the message. **2** Check the function of the door interlocks (see the service manual for interlock locations).
CLOSE FRONT COVERS FOR HELP PRESS ?	The covers need to be closed.	**1** Press HELP for more information. **2** Close the front covers. **Note** This message might also appear if the fuser is missing or incorrectly installed. Ensure that the fuser is correctly installed.
CLOSE FRONT DUPLEX DRAWER	The duplex drawer is not completely closed.	Close the duplex drawer.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
CLOSE MIDDLE FRONT DRAWER	The drawer that holds the intermediate transfer belt is open. **Note** This drawer is called the ITB drawer, but is referred to as the middle front drawer for end-users. Switch SW1 indicates the drawer is open. When the drawer is closed, a plastic protrusion on the lower left corner of the drawer pivots an arm that allows SW1 to toggle to the open position.	**1** Close the ITB drawer. **2** If the message persists, remove the printer's left-side cover and inspect the mechanical linkage that closes SW1. **3** Refer to the wiring diagram to verify the wiring; the two-wire connector should be firmly seated to SW1 and the wiring harness should be firmly seated to connector J1003 of the DC controller PCB. **4** If the message persists, use an ohmmeter to verify functionality of SW1.
CLOSE TOP COVER	SW2 indicates whether the printer's toner access cover is closed. When the toner access cover is closed, a lever is pushed down. This in turn rotates a pivot forward, opening the top cover switch (SW2).	**1** Close the top cover. **2** If the message persists, remove the printer's top assembly cover and check all mechanical linkages associated with SW2. **3** Verify that the connector on J1003 of the DC controller PCB is firmly seated.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
CLOSE UPPER REAR DRAWER	Switch SW5 monitors the closing of the printer's upper rear door (this door provides access to the fusing assembly). When the fusing door is closed, a tab on the rear door pushes a door switch actuator that runs along the left side of the printer and closes SW5.	**1** Close the upper rear drawer. **2** If the message persists, remove the printer's left-side cover and inspect the mechanical linkage of SW5 and the lever. **3** Refer to the wiring diagram and verify that all connections (J103 of the DC controller PCB and to SW5) are firmly seated. **4** Verify that both the drum drawer and the ITB drawer are firmly closed. Closing these drawers also closes SW4. **Note** The ITB drawer is referred to as the middle front drawer for end-users. Closing the rear door, the drum drawer, and the ITB drawer closes SW4 and SW5. When either of these switches is open, the +24 V supply is disabled. This safety feature protects the operator from any high voltages.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
CLOSE UPPER FRONT DRAWER	The drawer that holds the imaging drum (the drum drawer) is open. Switch SW3 indicates that the drawer is open. When the drawer is closed, a plastic protrusion on the lower left corner of the drawer pivots an arm that allows SW3 to toggle to the open position.	**1** Open the drawer and then firmly push it closed using one hand in the middle of the drawer. **2** If the message persists, remove the printer's left-side cover and inspect the mechanical linkage that closes SW3. **3** Refer to the wiring diagram and verify the wiring. The two-wire connector should be firmly seated to SW3 and the wiring harness should be firmly seated to connector J1003 of the DC controller PCB. **4** If the message persists, use an ohmmeter to verify functionality of SW3. **5** Verify that FM3 (in the front of the imaging drum drawer) is functioning correctly. The fan connects through J77 to J1022 on the DC controller. **Note** Closing the drawer also closes SW4 (the drum drawer switch). When SW4 is open, the +24 V supply is disabled. This safety feature protects the operator from any high voltages when the drum drawer or ITB drawer is open.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
CONFIG LANGUAGE	The printer has recognized the key sequence for selecting the display language.	Wait for the display language options to appear and then select the appropriate language. For more information about selecting the display language, see the service manual.
CONTINUOUS PAGE PRESS CANCEL JOB	The printer configuration page is being printed continuously.	Press CANCEL JOB to terminate continuous configuration page printing and return the printer to the READY state. **Note** The HP LaserJet 4550 Paper Path test runs from the Information Menu.
CONTINUOUS TEST PRESS CANCEL JOB	A continuous configuration page is printing.	Press CANCEL JOB to exit the configuration page printout mode. If the printer is in the process of printing when CANCEL JOB is pressed, the printer finishes printing the buffered pages before returning online.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
CPR SENSOR OUT OF RANGE	The CPR sensor is not behaving correctly.	**1** Force a calibration by selecting CALIBRATE NOW from the PRINT QUALITY menu. See "Calibrate Now (CLJ 3500/3700, CLJ 4600, and CLJ 5500 only)" on page 263. **2** If the message persists, verify that the cables are seated correctly and the connectors J32 (on the color registration detection unit) and J1119 (on the DC controller) are making good contact. **3** If a laser/scanner unit has recently been replaced, make sure it has been installed correctly. If it is installed correctly, replace it with a new one. **4** Replace the color registration detection unit. **5** If the message persists, replace the DC controller PCB. Calibrate the printer after replacing the DC controller.
DATA RECEIVED alternates with READY (CLJ 3500/3700)	The printer received data and is waiting for a form feed. When the printer receives another file, the message should disappear.	Press to continue.
DATA RECEIVED (CLJ 4500/4550)	The printer has received and processed data and is waiting for a form feed.	Press CANCEL JOB and resend the last page of the job, making sure that a form feed is sent with it, or press GO to feed a new sheet of media through the printer.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
DATA RECEIVED PRESS GO KEY (CLJ 4600/5550)	The printer has received and processed data. The printer is waiting for a form feed.	Press GO.
DATA RECEIVED TO PRINT LAST PAGE PRESS ⊘ (CLJ 8500/8550)	The printer received data and is waiting for a form feed. When the printer receives another file, the message should disappear.	Press SELECT to continue.
DENSITY SENSOR OUT OF RANGE alternates with CLEAN DENSITY SENSOR	A density sensor out-of-range error was detected during a color calibration.	The density sensor might be dirty. Inspect and clean the sensor. **Note** The density sensor on the CLJ 8500/8550 is cleaned whenever the top right door is opened and closed. A piece of foam attached to the transfer drum wipes the density sensor lens. This error is more often related to a printer failure that causes the density pattern not to be written to the ITD. Defeat the right upper door interlocks and examine the ITD during calibration to see if the patterns are written correctly.
DETECTABLE SIZE IN TRAY XX FOR HELP PRESS ? alternates with DETECTABLE SIZE IN TRAY XX RECOMMEND MOVE SWITCH TO STANDARD	A tray has been loaded with paper that is a standard size and the switch in the tray is set to custom.	**1** Move the switch to the standard position. **2** Make sure that the media guides are against the media. If available, press HELP for detailed information, and then use the UP ARROW and DOWN ARROW buttons to step through instructions.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
DIAGNOSTICS MODE	The extended diagnostics power-up key sequence has been entered. See the diagnostics procedures in the service manual.	No action is required.
DISK DEVICE FAILURE alternates with READY FOR MENUS PRESS ✓ (CLJ 4600/5500) or with READY (CLJ 9500)	The EIO hard disk had a critical failure and can no longer be used.	**1** Turn off the printer. **2** Remove and reinstall EIO hard disk. **3** Turn the printer on again. **4** If the error persists, replace the EIO hard disk.
DISK DEVICE FAILURE (CLJ 8500/8550)	The printer hard disk internal self-test routine has been invoked to read minimum and maximum logical block addresses (with no retries) and has detected a failure. If access to the printer hard disk is not required, printer operation can continue.	Replace the printer hard disk.
DISK FILE OPERATION FAILED alternates with READY FOR MENUS PRESS ✓ (CLJ 4600/5500)	The printer received an illogical PJL command (such as a download to a nonexistent directory).	**1** Printing can continue. **2** Turn the printer off and then on. **3** If the message persists, a problem might exist with the software program.
DISK FILE OPERATION FAILED (CLJ 8500/8550/9500)	The printer received an illogical PJL command (such as a download to a nonexistent directory).	No action is required.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
DISK IS FULL (CLJ 8500/8550)	The printer hard disk is full.	**1** At the host computer, delete data from the printer hard disk by using the printer drivers or a disk-management program. **2** To clear *all* data from the printer hard disk, reformat the printer hard disk at the printer control panel: **a** Press MENU until CONFIGURATION MENU appears on the display. **b** Press ITEM until INITIALIZE DISK appears on the display. **c** Press SELECT to reformat the printer hard disk.
DISK FILE SYSTEM IS FULL alternates with READY FOR MENUS PRESS ✓ (CLJ 4600/5500)	The disk file system has reached its capacity.	**1** Use the HP Web Jetadmin software to delete files from the EIO disk drive and try again. **2** To remove this message from the display, turn the printer off and then on.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
DISK IS WRITE PROTECTED alternates with READY FOR MENUS PRESS ✓ (CLJ 4600/5500) or with READY (CLJ 9500)	The file system device is protected and no new files can be written to it.	**1** To enable writing to the disk, turn off the write protection by using HP Web Jetadmin. **2** To remove this message from the display, turn the printer off and then on.
DISK IS WRITE PROTECTED (CLJ 8500/8550)	A user has attempted to save to the printer hard disk while the printer hard disk is write-protected.	See the system administrator for access to the printer hard disk.
DOORS OPEN TEST ABORTED	A printer door has been opened during a test. The test has been aborted.	Close the door, and restart the test.
DRUM ERROR REPLACE DRUM KIT (CLJ 4500/4550)	An error has been detected with a component of the printer drum kit.	Replace the drum kit.
DRUM ERROR REPLACE DRUM KIT (CLJ 8500/8550)	The printer has detected an error in the imaging-drum memory device. Printing can continue but will be stopped as soon as the waste-toner signal is triggered. Printing behavior is determined by the TONER LOW control-panel setting. See the service manual for information about the TONER LOW setting.	**1** Turn the printer off and on to reset the printer. **2** Reconnect connector J209, and reconnect relay connectors J47 and J48 on the controller board. **3** Replace the drum kit.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
DRUM LIFE LOW REPLACE DRUM KIT (CLJ 4500) -or- DRUM LIFE LOW ORDER DRUM KIT (CLJ 4550)	Approximately 80 percent of the drum life has been consumed.	Continue printing and order the drum kit. Drum replacement will be required in the near future.
DRUM LIFE LOW REPLACE DRUM KIT (CLJ 8500/8550)	The imaging drum is almost past its specified life. Printing can continue; however, print quality might be degraded.	Although printing can continue, the drum kit should be replaced for optimum printer operation.
DRUM LIFE OUT REPLACE DRUM KIT (CLJ 4500/4550)	The imaging drum has reached the end of its expected life.	Replace the drum kit.
DRUM LIFE OUT REPLACE DRUM KIT (CLJ 8500/8550)	The imaging drum is past its specified life or the waste-toner container in the imaging drum is full. Printing cannot continue until the drum kit has been replaced.	**1** Replace the drum kit. **2** Remove the drum cartridge from the printer, and clean the waste-toner sensor window with a dry cloth. **3** Reconnect connector J221 on the controller board, and connectors J631 to J633 and relay connector J71 on the waste-toner sensor. **4** Reconnect connector J209, and relay connectors J47 and J48 on the controller board. **5** Replace the drum cartridge. **6** Replace the waste-toner sensor.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
DUPLEXER ERROR CHECK DUPLEXER (CLJ 4500/4550)	An error has occurred in the duplexer.	**1** Verify that the duplexer is correctly installed. **2** Verify that the small power cord from the duplexer is plugged into the printer, and the power cord from the ac outlet is plugged into the duplexer.
DUPLEX ERROR CHECK DUPLEXER (CLJ 8500/8550)	The printer has detected an error in the duplexer.	**1** Open the left lower cover, press the green tab on the right side of the duplexer, and pull the duplexer out of the printer. Check for and remove any jammed media from the duplexer. Reinstall the duplexer. **2** Turn the printer off and on to reset the printer. **3** If the message persists, replace the duplexer.
EIO DISK X NOT FUNCTIONAL FOR HELP PRESS **?** (CLJ 4600/5500)	The EIO disk in slot X is not working correctly.	Remove the EIO disk from the slot indicated and replace it with a new EIO disk drive.
EIO <N> INITIALIZING	An EIO accessory is initializing. <n> = EIO slot number: 1 Bottom EIO slot 2 Top EIO slot	No action is required.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
EIO <N> NOT FUNCTIONAL (CLJ 8500/8550)	An EIO card error exists, but printing can continue. The configuration page will indicate that EIO <n> is not supported. <n> = EIO slot number: 1 Bottom EIO slot 2 Top EIO slot	**1** Turn the printer off and on to reset the printer. **2** Replace the offending EIO accessory.
EIO X INITIALIZING YYY alternates with DO NOT POWER OFF	The EIO device in slot X is initializing. The YYY value increments every 10 seconds during this process.	No action is required.
EIO X NOT FUNCTIONAL (CLJ 4500/4550)	The EIO slot specified does not have a card installed or is not functional.	No action is required.
ENGINE TEST	The printer is running an internal test to verify operation. When the printer is finished, the printer returns to the ready state but remains offline.	Press Go to bring the printer online.
FACE UP OUTPUT BIN FULL	The top output bin on the multi-bin mailbox is full.	**1** Remove all media from the top output bin in the multi-bin mailbox to continue printing. **2** Check the functionality of the Bin Full flag.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
FLASH DEVICE FAILURE alternates with READY FOR MENUS PRESS ✓ or with READY TO CLEAR PRESS ✓ or with READY	A device failure has occurred on the specified drive.	**1** Printing can continue for jobs that do not require the flash DIMM. **2** To remove this message from the display, turn the printer off and then on. **3** If the message persists, remove and reinstall the flash DIMM. **4** If the message persists, replace the flash DIMM.
FLASH FILE OPERATION FAILED alternates with READY FOR MENUS PRESS ✓ or with READY TO CLEAR PRESS ✓ or with READY	The requested operation could not be performed. You might have attempted an illegal operation, such as trying to download a file to a nonexistent directory.	**1** Printing can continue. **2** Turn the printer off and then on. **3** If the message reappears, a problem might exist with the software program.
FLASH FILE SYSTEM IS FULL alternates with READY FOR MENUS PRESS ✓ or with READY TO CLEAR PRESS ✓ or with READY	The flash disk or file system has reached maximum capacity.	**1** Use HP Web Jetadmin software to delete files from the flash memory and try again. **2** Use HP Web Jetadmin to download or delete files and fonts (see the download utility help for more information). **3** Using the control panel, delete stored jobs that are not needed. **4** To remove this message from the display, turn the printer off and then on.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
FLASH IS WRITE PROTECTED alternates with READY FOR MENUS PRESS ✓ or with READY TO CLEAR PRESS ✓ or with READY	The file system device is protected and no new files can be written to it.	**1** To enable writing to the flash memory, turn off the write protection by using HP Web Jetadmin. **2** To remove this message from the display, turn the printer off and then on.
[FS] messages (CLJ 3700)	[FS] messages indicate errors similar to the Flash device errors. [FS] DEVICE can be either: [FS FLASH] DEVICE or [FS RAM DISK] DEVICE.	To remove the message from the display, press ✓.
GENUINE HP SUPPLIES DESIGNED FOR <PROD>	This genuine HP supply was not designed for this printer and is not supported. Print quality might be affected.	Replace this supply with a genuine HP supply designed for the printer in use.
INCORRECT FUSER LOWER LEFT DOOR	The printer has detected that an incompatible fuser (possibly the wrong voltage of fuser for the printer) has been installed.	**1** Remove the fuser and install the fuser specified for use with this printer. Printing cannot continue until the correct fuser is installed in the printer. **2** Reconnect connector J222 on the controller board and connector J26 on the fuser. **3** Replace the controller board.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
INCORRECT SUPPLIES FOR STATUS PRESS ✓	At least one supply item is incorrectly positioned in the printer and another supply item is missing, incorrectly placed, out, or low.	**1** Press SELECT and then press HELP for help. **2** Follow the instructions on the display to locate and replace the incorrect supply. **3** Press the UP ARROW and DOWN ARROW to step through the instructions.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
INSTALL CLEANER (CLJ 9500)	The cleaner is not installed or is not installed correctly.	**1** Make sure that the transfer cleaner is installed correctly and that the cleaning kit is within life specifications. **2** Remove and reseat the cleaner and the waste-toner collection bottle. **3** Open the front doors and lightly tap on the waste-toner bottle. Close the front doors and check to see if the error goes away. **4** Make sure that the front doors are completely closed. **5** If the error persists, check the sensor flag mechanism in the toner collection bottle to make sure that it moves correctly. **6** Replace the cleaning kit. **7** Check connectors J1403, J1402, and J1401 on the waste sensor assembly; intermediate connector J3081; and connector J821 on the T driver PCA. **8** Replace the waste-toner sensor assembly.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
INSTALL <COLOR> (CLJ 8500/8550) **CAUTION** Press the blue button to rotate the carousel to prevent damage to the printer.	The print cartridge is not installed, not correctly installed in the printer, or not being detected by the cartridge sensor. <Color> = Cyan, magenta, yellow, or black	**1** Insert the cartridge or make sure that the installed cartridge is correctly seated in the printer. **Note** The color-toner carousel will not rotate unless the following conditions are met: ◆ The blue toner lever is locked. ◆ The clear door is closed. ◆ The imaging drum is installed. ◆ The black print cartridge is installed completely, including removing the orange seal from the black print cartridge and swinging the upper (blue) lever to the left. ◆ The right upper door is closed. **2** Turn the printer off and on to reset the printer. **3** If the cartridge is installed correctly, check that the sensor PS1901C is functioning correctly. If necessary, replace the sensor. **4** Clean the sensor with a toner wipe.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
INSTALL <COLOR> (CLJ 8500/8550) continued		**5** Reconnect connector J221 on the controller board, and reconnect connector J621 and relay connector J70 on the remaining color-toner sensor. **6** Make sure that the black print cartridge is installed. If cartridge is installed, turn the printer off, reinstall the cartridge, and then turn the printer on. **7** Reconnect connectors J641 and J644 on the main relay PCA, and connector J102 on the power supply. **8** Reconnect connector J227 on the controller board, and connector J647 on the main relay PCA. **9** Check electrical continuity between connector J644-1 (PBK) and J644-2 (PMP) when the door switch (SW644) is turned on. If no electrical continuity exists, replace the black print cartridge on/off switch. **10** Move the upper lever (blue) to the left. Replace the lever if it is cracked.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
INSTALL <COLOR> (CLJ 8500/8550) continued		**11** Replace the black print cartridge if it is deformed or damaged. **12** Replace the remaining color-toner sensor. **13** Replace the controller board.
INSTALL <COLOR> CARTRIDGE alternates with FOR HELP PRESS ? (CLJ 3500/3700)	A color cartridge is installed in an incorrect slot or the cartridge is the wrong type, and the cover is closed, or either the memory controller PCB or the DC controller PCB are defective.	**1** Press **?** for help, or verify that the cartridge is installed into the correct slot (slots are color coded for each cartridge) and that it is correctly seated. **2** Replace the memory controller PCB. **3** Replace the DC controller PCB.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
INSTALL <COLOR> CARTRIDGE alternates with FOR HELP PRESS ? (CLJ 4600/5500)	The cartridge is either not installed or not correctly installed in the printer.	**1** Insert the cartridge or make sure the cartridge is fully seated. **2** Press HELP for detailed information. **3** Press UP ARROW and DOWN ARROW to step through the instructions. **4** If the error persists, replace the cartridge. **5** Verify that the connectors between the memory tag antenna, memory controller board, and the DC controller are seated correctly. **6** Replace the antenna PCB for the indicated color. **7** Replace the memory controller PCB. **8** Replace the DC controller PCB. Calibrate the printer after replacing the DC controller. See “Calibrate Now (CLJ 3500/3700, CLJ 4600, and CLJ 5500 only)” on page 263.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
INSTALL FUSER FOR HELP PRESS ?	The fuser is either not installed or not correctly installed in the printer.	**1** Insert the fuser or make sure that the installed fuser is fully seated. **2** Press HELP for detailed information and then Press UP ARROW and DOWN ARROW to step through the instructions. **3** If the error persists, verify that the connectors J18 (on the fuser) and J1101 (on the DC controller) are good; replace them if necessary. **4** Replace the fuser assembly. **5** Replace the DC controller PCB. Calibrate the printer after replacing the DC controller. See “Calibrate Now (CLJ 3500/3700, CLJ 4600, and CLJ 5500 only)” on page 263.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
INSTALL FUSER FOR HELP PRESS ?	The fuser is either not installed or not correctly installed in the printer.	**1** Press **?** for help. **2** Make sure the fuser is correctly seated in its slot. **3** Reseat the fuser. Check the connector J5013 between the fuser and the printer. Replace it if damaged. **4** Turn the printer off and remove the fuser. Measure the resistance between the fuser connectors J5013LA-2 (MAINTH) and J5013LA-1 (GND). If it is not within the range of 330k to 50k ohms (at ambient temperature), replace the fuser. **5** Measure the resistance between the fuser connectors J5013L-2 (FSRH) and J5013L-1 (FSRN) with the fuser removed. If it is not within the range of 12 to 52 ohms (at ambient temperature), replace the fuser. **6** Replace the DC controller PCB.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
INSTALL FUSER LOWER LEFT DOOR	The printer has detected that the fuser is not installed.	**1** Install the fuser and verify that it is working correctly. **2** Reconnect connector J26 on the fuser. **3** Reconnect connector J222 on the controller board. **4** If the message persists, replace the controller board.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
INSTALL IMAGING DRUM OPEN FRONT DOOR	The printer has detected that the imaging drum is not installed. All doors must be closed for the printer to detect the imaging drum.	**1** Install the imaging drum before attempting to print. If the condition persists, take the imaging drum out and reinstall it. **Note** The imaging drum must be installed and the upper lever must be to the left in order for the carousel to rotate. **2** Turn the printer off and on to reset the printer. **3** Replace the drum cartridge. **4** Replace the drum cartridge if the drum cartridge on/off switch guide is deformed. **5** Make sure that the drum cartridge is installed. ◆ Install the drum cartridge if it is not installed. ◆ If the drum cartridge is already installed, turn the printer off, reinstall the drum cartridge, and turn the printer on.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
INSTALL IMAGING DRUM OPEN FRONT DOOR continued		**6** Reconnect connectors J641 to J643 and J647 on the main relay PCA, connectors J671 and J673 on the subrelay PCA, connector J102 on the power supply, and connector J227 on the controller board. **7** Check electrical continuity between connector J641-1 (+24 VB) and J642-3 (PMP) on the main relay PCA when the door switch (SW641) is turned on. If there is no electrical continuity, replace the right cover switch on the main relay PCA. **8** Check electrical continuity between connector J671-2 (PMP) and J671-2 (PFUPR) on the subrelay PCA when the door switch (SW671) is turned on. If no electrical continuity exists, replace the delivery cover/front cover switches on the subrelay PCA. **9** Measure the voltage across connector J641-1 (+24 VB) and J641-A1 (GND) on the main relay PCA after the printer is turned on. If the voltage is not 24 V, replace the power supply.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
INSTALL IMAGING DRUM OPEN FRONT DOOR continued		**10** Measure the voltage across connector J647-B11 (+24UH) and J647-4 (GND) on the main relay PCA after the printer is turned on. If the voltage is not 24 V, replace the main relay PCA. **11** Check the drum cartridge on/off switch lever on the printer. Set the lever at the correct position if it is disconnected. Replace the lever if it is cracked. **12** Reconnect connector J209, and reconnect relay connectors J47 and J48 on the controller board. **13** Replace the controller board.
INSTALL TRANSFER BELT (CLJ 9500)	The ITB is not installed or cannot be detected.	**1** Open the front doors, lower the green lever, and then remove and reseat the ITB. **2** Check the connector on the right side of the ITB for damage. Replace the ITB if necessary. **3** Check the harness and the connectors that support the ITB fan and the thermistor (J3022), and check connector J131 on the DC controller.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
INSTALL TRANSFER DRUM OPEN RIGHT DOOR	The printer has detected that the transfer drum is not installed. All doors must be closed for the printer to detect the transfer drum. If the right upper cover interlock is defeated, this error will occur unless the density sensor is covered with paper.	**1** Install the transfer drum before attempting to print. **2** Take the transfer drum out and reinstall it. **3** Make sure that the transfer drum is installed. • If the transfer drum is not already installed, install the transfer drum. • If the transfer drum is already installed, turn the printer off, verify that the transfer drum is in the correct position, and turn the printer on again. **4** Reconnect connector J1101 on the density sensor PCA, intermediate connectors J75 and J46, and connector J206 on the controller board. **5** Measure the voltage across connector J704-1 (+24 VAR) and GND on the density sensor PCA after the printer is turned on. If the voltage is not about 24 V, replace the density sensor PCA. **6** Replace the controller board.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
INSTALL TRANSFER ROLLER (CLJ 9500)	The second transfer roller is not installed, or a problem occurs when it is lifted into position.	**1** Make sure that the secondary transfer roller is installed correctly. Reseat the secondary transfer roller is necessary. **2** Defeat the front door interlocks and check the secondary transfer roller for correct up and down movement. **3** Check for continuity from the secondary transfer assembly high-voltage contacts to the high-voltage power supply. **4** Check connector J3036 on the registration motor (M11) and connector J117 on the DC controller. **5** Check the four lift arms on the secondary transfer assembly for bonds or damage that might inhibit correct movement up. Repair or replace the lift arms if necessary. **6** Check the secondary transfer clutch (CL3) for correct functionality, and check connectors J3030, J3026, and J121 on the DC controller. **7** Replace the secondary transfer assembly.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
INSTALL TRANSFER UNIT alternates with FOR HELP PRESS ?	The transfer unit is either not installed or not correctly installed in the printer.	**1** Insert the transfer unit or make sure the installed transfer unit is fully seated. **2** Press HELP for detailed information. **3** Press UP ARROW and DOWN ARROW to step through the instructions. **4** If the error persists, verify that the ETB connectors (J36 and J38 on the ETB and J1111 on the DC controller PCB) are good. Replace connectors as necessary. **5** Replace the ETB. **6** Replace the DC controller PCB. Calibrate the printer after replacing the DC controller. See “Calibrate Now (CLJ 3500/3700, CLJ 4600, and CLJ 5500 only)” on page 263.
INSTALL TRANSFER UNIT alternates with FOR HELP PRESS ? (CLJ 3500/3700)	The transfer unit is either not installed or not correctly installed in the printer, is defective, the high-voltage power supply connection to the transfer unit is defective, or the DC controller PCB is defective.	**1** Press **?** for help. **2** Ensure the transfer unit is fully seated, that the contracts are not damaged. **3** Replace the transfer unit. **4** Replace the high-voltage power supply PCB. **5** Replace the DC controller PCB.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
LOCK TONER LEVER	The blue lever inside the clear door is not locked.	**1** Open the front door of the printer, open the clear door, and swing the blue toner lock lever on the carousel to the right. **2** Remove the print cartridge, and then reinstall it, making sure the cartridge is all the way in the printer. **3** Swing the blue toner lock lever on the carousel to the left until it clicks, and then close the clear and front doors.
MAILBOX COMM ERROR CHECK CABLES CYCLE POWER	Communication with the multi-bin mailbox has been lost.	**1** Verify that all cables are connected correctly. **2** Turn the printer off and on to reset the printer.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
NON HP CARTRIDGE DETECTED or NON HP SUPPLY DETECTED	A new cartridge or other supply has been installed that is not made by HP. This message continues to appear until an HP cartridge is installed or CANCEL JOB is pressed.	If you believe that the supply is an HP supply, call the HP fraud hotline at 1-877-219-3183. Any printer repair required as a result of using non-HP supplies is not covered under HP warranty. To continue printing, press CANCEL JOB. The first pending job will be cancelled. **1** Remove and replace the indicated supply, and make sure that genuine HP supplies are installed. If the supplies are not HP supplies, replace them with genuine HP supplies. **2** Press CANCEL JOB to continue printing. **Note** Moving a print cartridge that is reporting a low or out condition to another printer might cause the print cartridge to report as a non-HP supply. **Additional procedures for CLJ 9500:** **3** Check connectors J16, J17, J18, and J19 on the print cartridge antenna units, and connectors J1006, J1007, J1008, and J1009 on the T driver PCA.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
NON HP CARTRIDGE DETECTED (continued)		**4** Check the e-label on the print cartridge, and check the antenna unit. Replace the print cartridge if you suspect a faulty e-label. **5** Replace the T driver PCA (see the service manual for details). **6** Replace the DC controller PCA (see the service manual for details).
NON HP CARTRIDGE IN USE or NON HP SUPPLY DETECTED alternates with READY FOR MENUS PRESS ✓	The printer has detected that a non-HP supply is currently installed.	If you believe that the supply is an HP supply, call the HP fraud hotline at 1-877-219-3183. Any printer repair required as a result of using non-HP supplies is not covered under HP warranty.
OUT OF MEMORY JOB CLEARED	The printer personality for the current job could not be run in the available memory. The job was canceled, and no pages were printed.	**1** Reprint the job. If the message persists, turn the printer off and on to reset the printer before sending the print job again. **2** Install more printer memory. For more information on printer memory options, see the service manual.
PCL MEMORY FULL STORED DATA LOST	The resource save area for the printer personality is full. Fonts downloaded to the printer RAM might have been deleted.	Turn the printer off and on to clear the printer RAM.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
PRESS SELECT TO INITIALIZE DISK	The printer hard disk is new or has been formatted for another file system.	**1** Press SELECT to reformat the printer hard disk. All data that is currently on the printer hard disk will be lost. **2** If you do not want to initialize the printer hard disk, wait until the message clears (10 seconds) or press GO and the disk will not be initialized. This will render the disk non-functional, but the configuration page will show that the disk is installed.
PRESS SELECT TO LOSE DISK DATA PRESS GO KEY TO CANCEL	This is a request to confirm initialization of the printer hard disk (see PRESS SELECT TO INITIALIZE DISK above). Initialization will perform a high-level check of the disk.	**1** If you want to proceed with initialization, press SELECT. **2** If you do not want to initialize the printer hard disk, wait until the message clears (10 seconds) or press GO and the disk will not be initialized. This will render the disk non-functional, but the configuration page will show that the disk is installed.
RAM DISK DEVICE FAILURE alternates with READY or with READY TO CLEAR PRESS ✓	The RAM disk had a critical failure and can no longer be used.	For CLJ 3700 printers, printing can continue for jobs that do not require the RAM disk. To remove the message from the display, press ✓. For other printers, turn the printer off, and then turn the printer on again to clear the error.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
RAM DISK FILE OPERATION FAILED alternates with READY or with READY TO CLEAR PRESS ✓	The requested operation could not be performed. You might have attempted an illegal operation, such as trying to download a file to a nonexistent directory.	**1** Try again with a different file or directory. **2** Check the driver settings to see if any job retention features are selected. **3** To remove the meessage from the display, press ✓. **4** If the message persists, a problem might exist in the software program.
RAM DISK FILE SYSTEM IS FULL alternates with READY or with READY TO CLEAR PRESS ✓	The RAM disk has reached its capacity.	**1** Delete files and then try again, or turn the printer off and then turn the printer on again to delete all of the files on the device. (Delete files by using HP Web Jetadmin or another software utility, or from the control panel. See the Help for more information.) **2** To remove the meessage from the display, press ✓. **3** If the error persists, increase the size of the RAM disk and change the RAM disk size from the CONFIGURE DEVICE menu at the control panel.
RAM DISK IS WRITE PROTECTED alternates with READY or with READY TO CLEAR PRESS ✓	The RAM disk is protected, and no new files can be written to it.	For CLJ 3700 printers, use HP Web Jetadmin to turn off write-protection. To remove the message from the display, press ✓. For other printers, no action is necessary.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
RECEIVING UPGRADE	A firmware upgrade is in progress.	Do not turn the printer off until the printer returns to a Ready state.
REMOVE AND SHAKE <COLOR> CARTRIDGE (CLJ 9500)	The T-crg (print cartridge) motor cannot turn the indicated print cartridge.	**1** Remove and check the indicated print cartridge and the printer side for damaged drive linkages. Shake the print cartridge a few times, reseat the print cartridge, turn the printer off, and then turn the printer on again. Replace the print cartridge or the drive linkages if necessary. **Note** Make sure that the print cartridges, when stored, were not exposed to high temperatures. **2** Check connector 814 on the T driver PCA. **3** Check color-appropriate connections near the motor: **4** K: J3046 **5** C: J3047 **6** M: J3048 **7** Y: J3049 **8** Replace the T driver PCA (see the service manual for details). **9** Replace the DC controller PCA (see the service manual for details).

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
REINSTALL TRANSFER BELT	This message occurs if you do not have the intermediate transfer belt installed in the printer or if sensor PS5 does not detect the home position marks (on the ITB). The ITB must be rotating before PS5 is able to detect its “home positioning” marks. Both the ITB and the imaging drum are driven by the drum motor (M4).	**1** Check SW1 to make sure it is operating correctly, and make sure the cables are connected. **2** Verify that the ITB is installed in the printer. **3** If the ITB is installed and seated correctly, verify that PS5 is not damaged. PS5 is located on the ITB assembly. If the sensor appears to be damaged, replace the ITB assembly. **4** Clean PS5. **5** Check all wiring within the ITB drawer. Note the connection on the ITB assembly (located on the front, lower, left-hand corner of the assembly). When the drawer is closed, the connector “mates” with a receptacle connector on the drawer. Verify that the connector and wiring are in good condition. Make sure that there is no paper in the connector at the base of the drawer. **6** Verify that the drum motor (M4) is rotating the imaging drum and the ITB. Run the drum test from diagnostic mode to verify drive-spindle movement for both the imaging drum and ITB. **7** Verify that the imaging drum connector is seated into the connector J204 of the developing PCB.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
REMOVE PAPER TOP OUTPUT BIN	The top output bin holds 250 sheets of paper. Sensor PS9 along with its sensor flag detects the height of the output paper stack. Perform the action items if this message appears when no paper is in the output bin.	**1** Verify that the PS9 sensor flag and arm move freely. **2** Verify PS9 is free of dust and debris (top assembly cover must be removed to access sensor). **3** Verify all connectors are firmly seated. Refer to the wiring diagram. **Note** PS9 (a three-wire sensor) plugs into a through-wall connector on the printer's chassis and then into a 14-pin wire harness, which plugs into J206 on the developing PCB. All signals from the developing PCB are routed to J201 on the developing PCB to J1017 on the DC controller PCB.
RESTORING FACTORY SETTINGS (CLJ 3500/3700) (CLJ 8500/8550)	The printer is resetting the printer's factory defaults. The printer is in the process of completing a cold reset. When the reset is completed, the printer returns to the ready state but remains offline.	For CLJ 3500/3700 printers, no action is necessary. For CLJ 8500/8550 printers, reset the EIO type and configure the printer before bringing the printer online. For more information about factory defaults and configuring the printer control panel, see the service manual.
ROM DISK DEVICE FAILURE alternates with READY (CLJ 9500)	The ROM disk had a critical failure and cannot be used.	Turn the printer off, and then turn the printer on again to clear the error.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
ROM DISK FILE OPERATION FAILED alternates with READY (CLJ 9500)	The requested operation could not be performed. You might have attempted an illegal operation, such as trying to download a file to a non-existent directory.	No action is necessary.
ROM DISK FILE SYSTEM IS FULL alternates with READY (CLJ 9500)	The ROM disk reached its maximum capacity.	Delete files and then try again, or turn the printer off and then turn the printer on again to delete all of the files on the device. (Delete files by using HP Web Jetadmin, another software utility, or the control panel. See the Help for more information.)
ROM DISK IS WRITE PROTECTED (CLJ 9500)	The ROM disk is protected, and no new files can be written to it.	Try using a new disk that is not write protected.
SELECT LANGUAGE	The language selection power-up key sequence has been entered. The printer will prompt the user to select a new display language after it has completed initialization.	Select a new language when prompted.
SERVICE MODE	The Service Mode power-up key sequence has been entered. The printer remains in Service Mode until you press Go.	Press Go to close Service Mode.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
SIZE MISMATCH TRAY XX=<SIZE> FOR HELP PRESS ? alternates with READY FOR MENUS PRESS ✓	The tray is loaded with media that is longer or shorter in the feed direction than the size that is configured for the tray.	**1** Adjust the side and rear media guides against the paper. **2** If the media used is Letter, Letter-R, A4, A4-R, Executive, B5 JIS, B5-R, A5, A5-R, A3, 11 by 17, or Legal size, the tray switch should be set to STANDARD. Set the tray switch to CUSTOM for all other media sizes. The tray switch must be set before the size can be selected at the control panel. **3** Reset the paper size in the Paper Handling menu.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
TONER OUT REPLACE <COLOR>	The printer is out of the specified toner and cannot continue. <color> = Cyan, magenta, yellow, or black	**1** Replace the print cartridge specified. **2** If the message persists, reconnect connector J226 on the controller board and connector J5001 on high-voltage converter 1 PCA. **3** Check the contact on the black print cartridge and the contact on the printer for damage. • Replace defective parts. (Replace the black print cartridge if it is defective.) • Check the contacts. If they are disconnected, return them to their correct positions. **4** If the message persists, replace the high-voltage converter 1 PCA. **5** If the message persists, replace the controller board.
TOO MANY FILE STORAGE DEVICES REMOVE EITHER DISK	The printer can support only one physical printer hard disk and two have been detected. Printing will not be possible until one of the hard disks has been removed.	Turn the printer off and remove the extra printer hard disk. **Note** The 8500/8550 DN model comes with a factory-installed internal hard disk on the formatter board.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
TOP OUTPUT BIN FULL	The top (face-down) output bin of the printer is full.	**1** Remove all media from the top (face-down) output bin on the printer to continue printing. **2** If the message persists, verify that the PS30, PS10, PS11, and PS3 sensors and the surrounding area are clean.
TRAY 1 CONTAINS UNKNOWN MEDIA (CLJ 8500/8550)	Media was stacked in tray 1 for continuous manual feed printing, and the job has been completed. However, the input tray contains media. The printer considers the input tray not to be configured.	Configure the media type for tray 1 or remove the remaining media.
TRAY 1 LOAD <TYPE> <SIZE> (CLJ 8500/8550)	A user has requested a media size that is not currently installed in tray 1. <type> = Last media type configured for the input tray <size> = Last media size configured for the input tray.	Load the media type and size specified on the printer control-panel display. After tray 1 is loaded, the printer automatically brings itself online. If the correct media type and size are loaded in tray 1 and the media does not feed into the printer, verify that the printer control-panel settings for tray 1 (Cassette mode) match the media type and size requested.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
TRAY 1 SIZE = <SIZE> (CLJ 8500/8550)	This message appears when media is placed in tray 1 and the tray is configured for Cassette Mode. <size> = Last media size configured for the input tray	**1** Press -VALUE+ to view the selections. **2** Press SELECT when the media size and type you want appears. **3** Press GO to bring the printer online. If no key is pressed for 30 seconds after the media is detected in the input tray, the displayed size is automatically selected, the message is cleared, and printing begins.
TRAY X EMPTY [TYPE] [SIZE] (CLJ 8500/8550)	An input tray not currently selected has run out of media. <x> = Input tray number (2, 3, or 4) <type> = Last media type configured for the input tray <size> = Last media size configured for the input tray	**1** Load the media type and size specified on the printer control-panel display. **2** Replace the upper/lower cassette lifter (remaining paper sensor lever) if it is damaged. Also, if the lifter is out of position, set it in its correct position. **3** If the message persists, reconnect connector J1201 on the pick-up PCA and connector J210 on the controller board. **4** If the message persists, replace the tray 2 and tray 3 remaining paper sensors 1 and 2. **5** If the message persists, replace the pick-up PCA. **6** If the message persists, replace the controller board.

Table 2-13 Alphabetical printer messages (continued)

Message	Description	Action
TRAY X EMPTY [TYPE] [SIZE] (CLJ 9500))	Tray X is detected as empty.	**1** Load media into tray X. **2** Reseat the media in tray X. **3** Check the lifter gear of the paper pickup unit for damage. Replace the lifter gear or paper pickup unit if necessary. **4** Check connector J11 and J13 on the lifter motor, intermediate connector J3001, and connector J120 on the DC controller PCA. **5** Check the media detection flag for damage or obstructed movement. **6** Adjust or replace the paper pickup unit if necessary. **7** Replace the DC controller PCA (see the service manual for details).
TRAY X OPEN OR EMPTY (CLJ 3500/3700)	The specified tray is open or is empty. If the tray is not open and is not empty, then the tray sensor, sensor connections, or the DC controller PCB might require replacement.	**1** See the service manual for specific troubleshooting and replacement information.
WASTE TONER FULL REPLACE DRUM KIT	The waste-toner-full sensor PS13 detects a waste-toner-full condition. A light receiver and light pipe arrangement, along with a window in the drum assembly, look for a waste fill condition. Verify that the sensors and light pipes are not blocked.	**1** Replace the drum kit. **2** Check the sensor, and replace it if it is defective.

Numerical error messages

The following table contains the numerical error messages for all of the printer models that are covered in this guide. Because different models require different procedures, make sure that you find the exact combination of numbers and words that appears in the error message on the control-panel display.

Note

For error messages pertaining to the CLJ 8500mfp, see “Numbered error codes for the CLJ 8550mfp” on page 218.

Table 2-14 Numerical error messages

Message	Description	Action
10.XX.YY SUPPLIES ERROR FOR HELP PRESS ? (CLJ 3500/3700) **Note** The printer cannot always determine whether the error exists in the cartridge or in the printer reader/writer.	The printer cannot read or write to at least one print cartridge memory tag, or at least one memory tag is missing. XX Description 00 memory error on supply 10 missing memory on supply YY Description 00 black print cartridge 01 cyan print cartridge 02 magenta print cartridge 03 yellow print cartridge	**1** Open and close the front door to re-engage the cartridges. **2** If the error persists, reseat the cartridges. **3** Exchange the cartridge for the indicated color with a cartridge in another slot to determine whether the error follows the cartridge or stays with the slot. If the error follows the cartridge, replace that cartridge. Otherwise, continue with step 4. **4** Check the memory controller PCB contacts to the memory tag and clean them if they are dirty. **5** Reseat the memory controller PCB connector J201 and DC controller PCB connector J1025.If the message persists, replace the antenna PCB. **6** If the message persists, replace the memory controller PCB. **7** If the message persists, replace the DC controller PCB.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
10.XX.YY SUPPLIES ERROR FOR HELP PRESS ? (CLJ 4600, CLJ 5500) **Note** The printer cannot always determine whether the error exists in the cartridge or in the printer reader/writer.	The printer cannot read or write to at least one print cartridge memory tag, or at least one memory tag is missing. XX Description 00 memory error on supply item 10 memory tag missing YY Description 00 black print cartridge 01 cyan print cartridge 02 magenta print cartridge 03 yellow print cartridge	**1** Turn the printer off and then on. **2** Exchange the cartridge for the color indicated with a cartridge in another slot to determine whether the error follows the cartridge or stays with the slot. If the error follows the cartridge, replace that cartridge. Otherwise, continue with step 3. **3** Reseat the connectors between the memory PCB (J602-J605) and the antenna PCBs (J901A-D), the memory PCB, and the DC controller PCB (J1028). **4** If the message persists, replace the antenna PCB. **5** If the message persists, replace the memory PCB. **6** If the message persists, replace the DC controller PCB. Calibrate the printer after replacing the DC controller.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
10.XX.YY SUPPLIES ERROR (CLJ 9500)) **Note** Replacing the image drum might correct the problem temporarily because the drum contains toner for about 50 pages. If the problem reoccurs after the image drum is replaced, check the print cartridge or the toner delivery system.	The printer cannot read or write to at least one print cartridge or image drum memory tag, or at least one memory tag is missing. XX description 00 = e-label memory data error 10 = e-label memory is missing 20 = refilled, non-HP supply (only appears in the event log) 30 = cloned cartridge/supply (only appears in the event log) 90 = toner replenishment malfunction reported by the image drum YY description 00 = black print cartridge 01 = cyan print cartridge 02 = magenta print cartridge 03 = yellow print cartridge 05 = black image drum 06 = cyan image drum 07 = magenta image drum 08 = yellow image drum When a 10.20.YY or 10.30.YY error occurs, a question mark is placed on the gauge for the supply or supplies that are generating the error. These errors are noted in the event log and NON HP SUPPLY IN USE appears on the control panel.	**1** In the instance of 10.00, 10.20 and 10.30 errors, check to see if refilled cartridges or drums are used. Replace them with HP consumables. **Note** If a drum or cartridge reached a “low” or “out” condition and was moved to a different printer, it might be reported as a NON HP SUPPLY. **2** Turn the printer off, and then turn the printer on again to possibly clear the error. **3** Replace the indicated supply. **4** Check the print cartridge or image drum e-label indicator for damage. Replace the print cartridge or the image drum if necessary. **5** For print cartridges, check the following connectors: • connectors J16, J17, J18, and J19 on the antenna PCAs. • connectors J1001, J1006, J1007, J1008, and J1009 on the memory controller PCA. • connector J802 on the T driver PCA.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
10.XX.YY SUPPLIES ERROR (CLJ 9500) (continued)	If multiple supplies have this error, a 10.XX.YY error is displayed for the first supply detected with the error. When the error corresponding to the first supply is resolved, another 10.XX.YY error is displayed for the next supply. This continues for all of the supplies errors. **Note** The consumables gauge and supplies status menu are always updated to indicate all supplies with a supplies memory error, even though the message refers to a single supply. **Note** 00 = memory data error might be caused when using non-HP supplies.	**6** For image drums, check the following connectors: ◆ connectors J12, J13, J14, and J15 on the antenna PCAs. ◆ connectors J1001, J1002, J1003, J1004, and J1005 on the memory controller PCA. ◆ connector J802 on the T driver PCA. **7** Replace the antenna PCA for the indicated cartridge or drum. **8** Replace the T driver PCA (see the service manual for details). **9** Replace the DC controller PCA (see the service manual for details). ● In the instance of a 10.90.YY error, the image drum is reporting toner concentration-to-carrier is very low. This error might occur when non-HP supplies are used. Make sure that the toner delivery system and shutters are functioning correctly.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
10.92.YY CARTRIDGES NOT ENGAGED (CLJ 3500/3700)	Cartridges are not engaged, poor primary transfer bias contacts exist, the high-voltage supply is defective, or control signal errors exist.	**1** Open and close the front door to re-engage the cartridges. **2** If the error persists, reseat the cartridges. **3** Check the printer primary transfer bias contacts to the transfer unit, and then clean them if they are dirty. If the contacts cannot be cleaned or if they are damaged, then replace the transfer unit. **4** If the message persists, replace the high-voltage power supply PCB. **5** If the message persists, replace the DC controller PCB.
13.XX JAM ERROR MESSAGES	For more information about jam error messages, see “Jams” on page 293.	

Table 2-14 Numerical error messages (continued)

Message	Description	Action
40 EIO X DATA ERROR alternates with PRESS GO TO CONTINUE (CLJ 4500) 40 EIO BAD TRANSMISSION (CLJ 4550) 40 EIO X BAD TRANSMISSION TO CONTINUE PRESS ✓ (CLJ 4600, CLJ 5500) 40.X HP EIO ERROR (CLJ 8500/8550) 40 BAD SERIAL TRANSMISSION (CLJ 9500)	A connection with the card in the specified slot has broken.	**1** Press SELECT to resume printing. **Note** A loss of data will occur. **2** Check that all cables are connected to the EIO ports and that the EIO board is seated correctly. **3** Turn the printer off and on to reset it. **4** If possible, print to another network printer to verify that the network is working correctly.
41.X PRINTER ERROR	A temporary printing error occurred. X description 1 = unknown misprint error 2 = beam detect misprint 3 = media feed error (size) 5 = media feed error (type) 6 = ITB detection error 7 = feed delay error	**1** Turn the printer off and on to reset the printer. **2** Check appropriate connectors. **3** If the error persists, troubleshoot the laser system (41.2), the media feed mechanisms, the media size/type settings, and the ITB seating (see the service manual for specific instructions).

Table 2-14 Numerical error messages (continued)

Message	Description	Action
41.3 UNEXPECTED PAPER SIZE LOAD TRAY 1 [WIDTH] [LENGTH] (CLJ 8500/8550) 41.3 UNEXPECTED SIZE TRAY X [WIDTH] [LENGTH] (CLJ 9500)	The tray is configured for a specific media size, but the printer detects a different size being fed. For example, the printer was expecting a letter-sized page but detected that a legal-sized page was fed instead.	**1** Check the media size definition for the specified tray. If necessary, reconfigure the media size defined for the tray. **2** Verify that the paper guides are set correctly. **3** If the error does not clear, turn the printer off, and then turn the printer on again. **4** If the error persists, check the tray size sensor mechanisms, the registration sensor for correct functionality, and the supporting connectors to the DC controller PCA.
41.5 UNEXPECTED PAPER TYPE alternates with CHECK PAPER IN TRAY X (CLJ 4500/4550)	A tray is configured for a specific media type, but the printer detects that a different media type is loaded. The most common cause for this error is a jam at the registration plate (under the ITB) where the customer does not remove the media. The engine tries to check the OHT sensor and receives an error message.	**1** Verify that the correct media type is loaded in the input tray and the printer control panel is configured correctly. **2** Clean the detection windows for OHT sensors 1 and 2.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
41.5 UNEXPECTED PAPER TYPE LOAD TRAY X [TYPE] [SIZE] (CLJ 8500/8550)	The printer was expecting one type of media to be fed from an input tray and a different type was fed. For example, the printer was expecting transparencies and plain paper was fed.	**1** Open and close the front door to remove the page from the printer. **2** Verify that the correct media is loaded in the input tray and the printer control panel is configured correctly. **3** Clean the detection windows for OHT sensors 1 and 2. **4** Reconnect connectors J1801 and J1802 for OHT sensors 1 and 2, connector J214 on the controller board, and relay connector J17. **5** If the error persists, replace OHT sensors 1 and 2. **6** If the error persists, replace the controller board.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
41.5 UNEXPECTED TYPE TRAY X alternates with TO CHANGE TYPE PRESS ✓ (CLJ 9500)	Tray (X) is loaded with media that is not of the same type configured for the tray. **Note** The printer only detects media or OHTs.	**1** Check the media type definition for the specified tray. **2** If necessary, reconfigure the media type for the tray. **3** If the error does not clear, turn the printer off, and then turn the printer on again. **4** If the error persists, check the transparency sensor for correct functionality. Check connector J3032 on the transparency sensor, intermediate connector J3027, and connector J121 on the DC controller PCA.
41.X PRINTER ERROR FOR HELP PRESS ✓ alternates with 41.X PRINTER ERROR TO CONTINUE PRESS ✓ (CLJ 4600, CLJ 5500)	A printer error has occurred. X Description 1 unknown misprint error 2 beam detect misprint error 3 media feed error (size) 4 no VSYNC error 5 media feed error (type) 6 ETB detection error 7 feed delay error 9 noise VSREQ	**1** Press SELECT to continue or press HELP for more information. **2** If the message persists, turn the printer off and then on.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
49.ERROR XXXX CYCLE POWER (CLJ 4500/4550)	A firmware error occurred that caused the processor on the formatter to abort operation. This type of error can be caused by invalid print commands, corrupt data, or invalid operations. In some cases, electrical noise in the cable can corrupt data during transmission to the printer. Other causes include poor-quality parallel cables, poor connections, or home-grown programs. On rare occasions, when the formatter is at fault, the error is usually indicated by a 79 Service Error.	**1** Turn the printer off and on to reset the printer. **2** Verify that all cables are connected. **3** Cancel all print jobs and then resend. Try to isolate any offending print job. **4** Delete the print job from the Windows spooler or from the print server. **5** If the formatter pan assembly or DC controller was removed, make sure that the ribbon cable between the DC controller and the interconnect PCB is connected. **Note** The message 49 (FFFF) appears on the printer control panel and the display is dark if the ribbon cable is not connected. (CLJ 4500/4550) To verify that the formatter is functioning correctly, run the formatter tests that are available in the diagnostics mode. If the formatter passes, the formatter is *not* defective. *Do not* replace the formatter. See the note in the Description column for information about the formatter.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
49.XXXX PRINTER ERROR alternates with TO CONTINUE TURN OFF THEN ON (CLJ 3500/3700, CLJ 4600, CLJ 5500) 49.XXXX ERROR CYCLE POWER (CLJ 8500/8550)	A critical firmware error has occurred that caused the processor on the formatter to abort operation. This type of error can be caused by invalid print commands, corrupt data, or invalid operations. In some cases, electrical noise in the cable can corrupt data during transmission to the printer. Other causes include poor-quality parallel cables, poor connections, defective EIO devices, or home-grown programs. On rare occasions, when the formatter is at fault, the error is usually indicated by a 79 Service Error.	**1** Press CANCEL JOB to clear the print job from the printer memory. **2** Turn the printer off and then on. **3** Try printing a job from a different software program. If the job prints, go back to the first program and try printing a different file. If the message appears only with a certain software program or print job, contact the software vendor for assistance. **4** Try a different driver. **5** If the message persists with different software programs and print jobs, disconnect all the printer cables that connect it to the network or computer. **6** Turn the printer off. **7** Remove all memory DIMMs or third-party DIMMs from the printer. (Do not remove the firmware DIMM in slot J1.) **8** Remove all EIO devices from the printer. **9** Turn the printer on.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
49.XXXX PRINTER ERROR TO CONTINUE TURN OFF THEN ON (CLJ 3500/3700, CLJ 4600, CLJ 5500) 49.XXXX ERROR CYCLE POWER (CLJ 8500/8550) (continued)		**10** If the error no longer exists, install each DIMM and EIO device one at a time, making sure to turn the printer off and then on as you install each device. **11** Replace a DIMM or EIO device if you determine that it causes the error. **12** Reconnect all cables that connect the printer to the network or computer. **13** If the error persists, replace the firmware DIMM. **14** If the error persists, replace the formatter and calibrate the printer.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
49.XXYY PRINTER ERROR (CLJ 9500)	A critical formatter firmware error occurred that caused the processor on the formatter to cease operation. **Note** Unique subcodes are constructed by creating a unique error of an 8-bit component ID (XX) and an 8-bit component-specific error (YY). The component ID and component specific error are useful in determining which part of the firmware failed.	**Note** The printer 49 errors are usually *not* fixed by replacing the formatter. **1** Turn the printer off, and then turn the printer on again to clear the error. **2** Make sure that the customer is using a known good software program, good driver, good cabling, and good connections. **3** Print a configuration page to make sure that the printer has the most recent release of formatter firmware. If necessary, flash the printer with new firmware. **4** Check all of the accessory hardware, such as memory DIMMs and EIO devices, on the formatter by removing them. (Removing the hardware eliminates them as possible causes of the error.) **5** If the error persists, the formatter might need to be replaced (see the service manual for details).
49 ADAC OR AFAC (CLJ 4500/4550)	The printer is printing a PostScript file in Windows 3.1 or 9*x*.	No action required.
49 FF01 TO FF05 (CLJ 4500/4550)	An NEC firmware ROM error has occurred.	Replace the firmware.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
49 FF02 (CLJ 4500/4550)	Unsupported EDO memory has been installed.	Remove unsupported memory.
49 04CC (CLJ 4500/4550)	Indicates a media timing issue. This occurs when printing multiple copies of transparencies or heavy or glossy media with either the PCL or PostScript driver. The message also can indicate a timing mismatch between the engine and formatter.	Print one transparency or heavy or glossy sheet at a time.
49 04E7 (CLJ 4500/4550)	Occurs during decompression of the strip buffers when the end of the strip marker is missing. This is triggered by one of the following: 1) The marker is corrupt; 2) The strip buffer size given to HiLite is too small; 3) The strip buffer size given to HiLite is too large. This error is primarily associated with the firmware and should not require a new formatter.	Resend the print job.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
49 04FF (CLJ 4500/4550)	A large print job (800 to 1,200 pages) or complex graphics can cause the printer to stop printing.	**1** Determine the page that is causing the failure. If the page contains an image, try to move the image down on a portrait page or to the left on a landscape page to move the image out of the strip that is failing. The movements have to be very small so that the next strip will not fail. **2** Put the printer in lossy mode with a sequence of PJL commands: ESC%-12345X@PJL @PJL Default Service mode=HPBOISEID @PJL Default Diagnostics=ON @PJL Enter Language = PCL ESC%-12345X@PJL Esc*z9999P Esc*z50P Esc*z201X To turn off lossy mode use the following commands: ESC%-12345X@PJL @PJL Default Diagnostics=OFF @PJL Default Service Mode=EXIT @PJL EOJ ESC%-12345X@PJL Using the printer in lossy mode might affect performance and print quality.
49 FFFF (CLJ 4500/4550)	An issue reported by the life test when replacing the fuser. This error might also occur during the boot cycle.	Replace the formatter.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
49FFOX (CLJ 4500/4550)	When this error message appears, you can scroll through the printer control panel to obtain all of the error information.	No action required.
49 0B0A (CLJ 4500/4550)	A request is not understood. This error message is generated when the I/O card does not support a command that was sent to it.	Check the command being sent; the I/O card might not support a particular feature.
49 0B22 (CLJ 4500/4550)	This error message is generated when the I/O card receives a control-panel menu action that it does not recognize.	Verify the action being sent.
50.X FUSER ERROR (CLJ 3500/3700)	A fuser error has occurred. X Description 1 low temperature error 2 fuser warm-up service 3 high fuser temperature 4 faulty fuser 8 low fuser temperature (subthermistor) 9 high fuser temperature (subthermistor)	See the service manual for specific instructions for troubleshooting and fuser replacement.
50.X FUSER ERROR (CLJ 4500/4550)	A fuser error has occurred. X Description 1 low temperature error 2 fuser warm-up service 3 high fuser temperature 4 faulty fuser 5 fuser voltage mismatch (verify that you have *not* installed a 110 V fuser in a 220 V printer, or vice versa) 6 fuser heater cutoff 7 fuser motor malfunction (see recommended action for 50.7 Fuser error)	**Note** Closely inspect the mechanical linkage. The gears along the gear drive path can bind the gears, which will prevent M1 from rotating.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
50.X FUSER ERROR FOR HELP PRESS ? (CLJ 4600, CLJ 5500)	A fuser error has occurred. X Description 1 low fuser temperature 2 fuser warmup service 3 high fuser temperature 4 faulty fuser 5 inconsistent fuser 6 open fuser heating circuit between the fuser and low-voltage power supply 8 low fuser temperature (subthermistor) 9 high fuser temperature (subthermistor)	**1** Turn the printer off and allow it to cool down. **2** Reinstall the fuser, and check the connector J4034 that connects the fuser and the printer. Replace the connector if it is damaged. **3** Turn the printer off and remove the fuser. Measure the resistance between the connector pins on the fuser. If resistance does not meet the following guidelines, replace the fuser. ◆ J4034-5 to J4034-6: 300 to 500 K ohms ◆ J4034-1 to J4034-2: less than 1 K ohm **4** Check for continuity between connector pins J4034-4 and J4034-2. If no continuity exists, replace the fuser. **5** If the error persists, replace the fuser power-supply PCB. **6** If the error persists, replace the DC controller PCB. Calibrate the printer after replacing the DC controller.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
50.X (CLJ 9500)	A fuser error occurred. Power cycle the printer to continue. X description 1 = low fuser temperature 2 = fuser detected not coming to operating temperature after a jam or open door 3 = high fuser temperature 6 = open fuser heating circuit between the fuser and low-voltage power supply 7 = fuser pressure release mechanism failure	**1** Remove the fuser and check it for damage or jammed media. **2** Make sure that the printer is plugged into appropriate ac voltage. **3** Turn the printer off, let it cool for 10 minutes, and then turn the printer on again to possibly clear the error. **4** Replace the fuser. **5** Check the fuser/print engine electrical connectors J3019 for damage. **6** Check connector J1501 on the fusing sensor PCA and connector J115 on the DC controller PCA. **7** Check for a fuser drive or fuser motor failure. Replace if necessary (see the service manual for details). **8** Replace the power supply unit (see the service manual for details). **9** Replace the DC controller PCA (see the service manual for details).

Table 2-14 Numerical error messages (continued)

Message	Description	Action
50.1 FUSER ERROR CYCLE POWER (CLJ 8500/8550)	A low-temperature error has occurred in the fuser.	**1** Verify that the fuser is completely seated inside the printer. **2** Turn the printer off and on to reset the printer. **3** If the error persists, turn the printer off and remove the fuser. Measure the resistance across fuser connectors J26F-A4 (FXTHU) and J26F-A3 (GND). If it is not in the range of 250 k ohms to 600 k ohms (room temperature), check the wiring from the connector J222 on the controller board up to the upper thermistor. If the wiring is normal, replace the fuser kit. **4** If the error persists, reconnect connector J222 on the controller board and connector J26 on the fuser. **5** If the error persists, replace the fuser kit. **6** If the error persists, replace the power supply.
50.2 FUSER ERROR CYCLE POWER (CLJ 8500/8550)	A warm-up error has occurred in the fuser.	**1** Turn the printer off and on to reset the printer. **2** Verify that the fuser is completely seated inside the printer. **3** Check for jams in the fuser. **4** If the error persists, replace the fuser kit.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
50.3 FUSER ERROR CYCLE POWER (CLJ 8500/8550)	A high-temperature error has occurred in the fuser. The controller board saves this error through an electrical charge in capacitor C259.	**1** Turn the printer off and then on to reset the printer. **2** Turn the printer off and unplug it. Place a flat blade of a screwdriver between the two wires of C259 to short out the capacitor and clear the memory. **3** If the error persists, replace the fuser kit. **4** If the error persists, replace the power supply. **5** If the error persists, replace the controller board.
50.4 FUSER ERROR CYCLE POWER (CLJ 8500/8550)	A fuser drive or power unit error has occurred in the fuser.	**1** Turn the printer off and on to reset the printer. **2** Verify that the fuser is completely seated inside the printer. **3** If the error persists, replace the fuser kit. **4** If the error persists, replace the power supply. **5** If the error persists, replace the controller board.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
50.6 FUSER ERROR CYCLE POWER (CLJ 8500/8550)	A heater error has occurred in the fuser.	**1** Turn the printer off and on to reset the printer. **2** Verify that the fuser is completely seated inside the printer. **3** Reconnect connector J222 on the controller board, connector J26 on the fuser, and connector J101 on the power supply. **4** If the error persists, replace the fuser kit. **5** If the error persists, replace the power supply. **6** If the error persists, replace the controller board.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
50.7 FUSER ERROR (CLJ 4500/4550)	The fusing motor (M1) drives the fusing assembly, the paper transport (web) assembly, the ITB lift mechanism, the transfer roller, the transfer roller lift mechanism, and the face-down output delivery drive assembly. A 50.7 fuser error appears when PS6 detects no motion within the fuser. Photosensor PS6 is the fusing-unit pressure switch.	**1** Turn the printer off and on to reset the printer. **2** Remove the left-side cover of the printer. Verify that the fusing motor (M1) connector is seated firmly into J102 of the feed PCB. **3** Ensure that the connector at J110 of the feed PCB is firmly seated (this connector contains the wiring for PS6, which provides fuser-motion feedback). **Note** Closely inspect the mechanical linkage. The gears along the gear drive path can bind the gears, which will prevent M1 from rotating. **4** If the error persists, observe the drive shaft of M1 while turning on the printer. If this shaft *does not* rotate, the failure is related to the motor drive circuitry. Refer to the printer wiring diagram to verify that connectors J102 and J106 of the feed PCB are firmly seated. If the error persists, replace the fusing motor and the feed PCB in sequence.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
50.7 FUSER ERROR (CLJ 4500/4550) (continued)		**5** If the shaft rotates (both forward and reverse) and the 50.7 fuser error appears, the cause of the error is related to the motion feedback circuitry. **6** Remove the fusing assembly and verify that the sensor flag is in good condition and functional. **7** Verify that the connector at sensor PS6 is firmly seated. **8** Clean the sensor. **9** If the error persists, replace sensor PS6.
51 LASER ERROR (CLJ 4500) -or- 51.X PRINTER ERROR (CLJ 4550)	A beam detect error or laser failure has occurred.	**1** Turn the printer off and on to reset the printer. **2** Verify that connectors J1102 on the laser driver PCB and J1008 on the DC controller are seated correctly. **3** Verify that connectors J551 on the beam detect PCB and J1006 on the DC controller are seated correctly. **4** If the error persists, replace the laser/scanner unit.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
51 LASER ERROR CYCLE POWER (CLJ 8500/8550)	A beam detect error or laser failure has occurred.	**1** Turn the printer off and on to reset the printer. **2** Reconnect connector J1001 on the laser driver PCA and connector J205 on the controller board. **3** Reconnect connector J2 on the beam detect PCA, relay connector J40, and connector J211 on the controller board. **4** If the error persists, replace the laser/scanner unit. **5** If the error persists, replace the controller board.
51.XY PRINTER ERROR FOR HELP PRESS ? 51.XY PRINTER ERROR TO CONTINUE TURN OFF THEN ON (CLJ 3500/3700, CLJ 4600, CLJ 5500)	A printer error has occurred. X Description 1 beam detect error 2 laser error Y Description 0 no color K black C cyan M magenta Y yellow	**1** Press SELECT to continue. **2** Turn the printer off and then on. **3** Reseat the connectors between the laser/scanner and DC controller PCB. **4** Replace the laser/scanner assembly if it is defective. Calibrate the printer after replacing the laser/scanner. **5** If the error persists, replace the DC controller PCB. Calibrate the printer after replacing the DC controller.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
51.XY PRINTING ERROR alternates with TO CONTINUE CYCLE POWER	A laser scanner assembly laser error occurred. X description 1 = beam detect error 2 = laser error Y description 0 = no color K = black C = cyan M = magenta Y = yellow	**CAUTION** When servicing the printer with the top cover off, cover the top of the printer to prevent light leaks that might blind the laser/scanner beam detect sensors. **1** Check the FFCs for damage, and make sure that they are correctly centered and seated in the connectors. Replace the FFCs if necessary. **2** The following are color-specific steps: **K laser** Check connector J3012 on the laser driver PCA, connector J3056 on the scanner motor, connector J3061 on the beam detect PCA, connectors J812 and J815 on the T driver PCA, and connector J110 on the DC controller PCA. **C laser** Check connector J3011 on the laser driver PCA, connector J3059 on the scanner motor, connector J3062 on the beam detect PCA, connectors J812 and J815 on the T driver PCA, and connector J110 on the DC controller PCA.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
51.XY PRINTING ERROR alternates with TO CONTINUE CYCLE POWER (continued)		**M laser** Check connector J3010 on the laser driver PCA, connector J3053 on the scanner motor, connector J3063 on the beam detect PCA, connectors J812 and J815 on the T driver PCA, and connector J110 on the DC controller PCA. **Y laser** Check connector J3009 on the laser driver PCA, connector J3050 on the scanner motor, connector J3064 on the beam detect PCA, connectors J812 and J817 on the T driver PCA, and connector J108 on the DC controller PCA. **3** Check FFC connectors J103 and J106 on the DC controller PCA, J9002 on the formatter cage, and J801 on the T driver PCA. **4** Replace the necessary laser scanner unit (see the service manual for details). **5** Replace the T driver PCA (see the service manual for details). **6** Replace the DC controller PCA (see the service manual for details).

Table 2-14 Numerical error messages (continued)

Message	Description	Action
52 SCANNER ERROR (CLJ 4550) -or- 52 PRINTER ERROR (CLJ 4550)	A scanner error has occurred.	**1** Turn the printer off and on to reset the printer. **2** Verify connectors J551 on the beam detect PCB, J1103 on the scanner motor, and J1006 on the DC controller are fully seated and connected correctly. **3** If the error persists, replace the laser/scanner unit.
52 SCANNER ERROR CYCLE POWER (CLJ 8500/8550)	A scanner error has occurred.	**1** Turn the printer off and on to reset the printer. **2** Reconnect connector J901 on the scanner motor PCA, relay connector J40, and connector J211 on the controller board. **3** Measure the voltage across connector J647-B11 (+24UH) and J647-4 (GND) on the main relay PCA after the printer is turned on. If the voltage is not 24 V, replace the power supply. **4** Measure the voltage across connector J211-7 (SCND) and J211-6 (GND) on the controller board after the printer is turned on. If the voltage changes from 0 V to 17 V or more, replace the laser/scanner unit. **5** If the error persists, replace the controller board.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
52.XY PRINTER ERROR FOR HELP PRESS ? 52.XY PRINTER ERROR TO CONTINUE TURN OFF THEN ON (CLJ 3500/3700, CLJ 4600, CLJ 5500)	A printer error has occurred. X Description 1 scanner error 2 scanner startup error 3 scanner rotation error Y Description 0 no color K black C cyan M magenta Y yellow	**1** Press SELECT to continue. **2** Turn the printer off and then on. **3** Reseat the connectors between the laser/scanner and DC controller PCB. **4** Replace the laser/scanner assembly if it is defective. Calibrate the printer after replacing the laser/scanner. **5** If the error persists, replace the DC controller PCB. Calibrate the printer after replacing the DC controller.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
52.X PRINTER ERROR alternates with TO CONTINUE CYCLE POWER (CLJ 9500)	A laser scanner assembly error occurred. X description 1 = scanner error 2 = scanner startup error 3 = scanner rotation error Y description 0 = no color K = black C = cyan M = magenta Y = yellow	**CAUTION** When servicing the printer with the top cover off, cover the top of the printer to prevent light leaks that might blind the laser/scanner beam detect sensors. **1** The following are color-specific steps: **K laser** Check connector J3012 on the laser driver PCA, connector J3056 on the scanner motor, connector J3061 on the beam detect PCA, connectors J812 and J815 on the T driver PCA, and connector J110 on the DC controller PCA. **C laser** Check connector J3011 on the laser driver PCA, connector J3059 on the scanner motor, connector J3062 on the beam detect PCA, connectors J812 and J815 on the T driver PCA, and connector J110 on the DC controller PCA. **M laser** Check connector J3010 on the laser driver PCA, connector J3053 on the scanner motor, connector J3063 on the beam detect PCA, connectors J812 and J815 on the T driver PCA, and connector J110 on the DC controller PCA.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
52.X PRINTER ERROR alternates with TO CONTINUE CYCLE POWER (CLJ 9500) (continued)		**Y laser** Check connector J3009 on the laser driver PCA, connector J3050 on the scanner motor, connector J3064 on the beam detect PCA, connectors J812 and J817 on the T driver PCA, and connector J108 on the DC controller PCA. **2** Check FFC connectors J103 and J106 on the DC controller PCA, J9002 on the formatter cage, and J801 on the T driver PCA. **3** Check the FFCs for damage, and make sure that they are correctly centered and seated in the connectors. Replace the FFCs if necessary. **4** Replace the necessary laser scanner unit (see the service manual for details). **5** Replace the T driver PCA (see the service manual for details). **6** Replace the DC controller PCA (see the service manual for details).
53.X0.ZZ PRINTER ERROR TO CONTINUE TURN OFF THEN ON (CLJ 4600, CLJ 5500)	An error has occurred in the onboard RAM.	**1** Press SELECT to continue. **2** Turn the printer off and then on.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
53.XY.ZZ CHECK DIMM A BANK B alternates with PRESS STOP TO CONTINUE (CLJ 3500/3700)	An error occurred in printer memory. A Device location 1 = DIMM slot 1 2 = DIMM slot 2 3 = DIMM slot 3 4 = DIMM slot 4 ZZ Error number 00 = DIMM unsupported 01 = DIMM SPD failure (unrecognized memory) 03 = DIMM error	**1** Press STOP. **2** Check the ZZ error number for the specific DIMM, and then: ◆ reseat the DIMM. ◆ try the DIMM in another slot (except for the firmware DIMM in slot 1). ◆ make sure that DIMMs are installed. ◆ make sure that the DIMMs are supported. ◆ try the DIMM in another printer.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
53.XY.ZZ PRINTER ERROR (CLJ 4500/4550) 53.XY.ZZ PRINTER ERROR TO CONTINUE PRESS CANCEL JOB (CLJ 4600, CLJ 5500) 53.XY.ZZ ERROR DIMM SLOT N (CLJ 8500/8550)	A memory error has occurred. If a DIMM caused the error, the DIMM will not be recognized (configured). X = Memory Type 0 ROM (CLJ 4500/4550) 1 RAM 2 font DIMM (CLJ 8550 only) Y = Device Location 0 onboard (CLJ 4500/4550) 1 DIMM slot 1 2 DIMM slot 2 3 DIMM slot 3 4 DIMM slot 4 (CLJ 4600, CLJ 5500, CLJ 8500/8550, CLJ 9500) 5 DIMM slot 5 (CLJ 8500/8550) 6 DIMM slot 6 (CLJ 8500/8550) 7 DIMM slot 7 (CLJ 8500/8550) 8 DIMM slot 8 (CLJ 8500/8550) ZZ = Error Number 00 unsupported memory 01 unrecognized memory 02 unsupported memory size (CLJ 4600, CLJ 5500, CLJ 8500/8550, CLJ 9500) 03 failed RAM test 04 exceeded maximum RAM size (CLJ 4600, CLJ 5500, CLJ 8500/8550, CLJ 9500))	**1** Verify that the DIMM is installed correctly. **2** Turn the printer off and then on to reset the printer. **3** Remove and replace the DIMM that caused the error.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
53.XY.ZZ PRINTER ERROR (CLJ 4500/4550) 53.XY.ZZ PRINTER ERROR TO CONTINUE PRESS CANCEL JOB (CLJ 4600, CLJ 5500) 53.XY.ZZ ERROR DIMM SLOT N (CLJ 8500/8550) continued	05 invalid DIMM speed (CLJ 4600, CLJ 5500, CLJ 9500) 05 exceeded maximum ROM size (CLJ 8500/8550) 06 invalid DIMM speed; check DRAM (CLJ 8500/8550) 07 DIMM is reporting incorrect checksum (CLJ 8500/8550) 10 DIMM address (CLJ 8500/8550) 11 PDC XROM out of bounds (CLJ 8500/8550) 12 could not make temporary mapping (CLJ 8500/8550) 13 invalid RAM type (CLJ 8500/8550) 14 DIMM not paired correctly (CLJ 8500/8550) 15 bad firmware upgrade DIMM checksum (CLJ 8500/8550) 16 more than one set of firmware upgrade DIMMs (CLJ 8500/8550) 17 not enough DRAM to run (CLJ 8500/8550) N = EIO slot number (CLJ 8500/8550) 1 bottom EIO slot 2 top EIO slot	
53.10.05 PRINTER ERROR TO CONTINUE TURN OFF THEN ON (CLJ 4600, CLJ 5500) (CLJ 9500)	A DIMM is installed in both 168-pin DIMM Slot 4 and 100-pin DIMM Slot 5. This is an invalid configuration. DIMMs cannot be installed in both of these slots at the same time.	Remove one of the DIMMs, or move one of the DIMMs to a different slot.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
54.1 PRINTER ERROR (CLJ 4500/4550)	An internal power failure has occurred.	**1** Turn the printer off and then turn it on. **2** If the error persists, replace the high-voltage power supply. **3** Check the fuser to make sure that no jams are present. **CAUTION** 54.1 errors can be caused by damaging the thermistor while clearing fuser jams. **4** Make sure that no fluctuation in the power supply to the printer is occurring. Check that the electrical specifications are met. **5** If the error persists, replace the low-voltage power supply.
54.1 TEMPERATURE SENSOR ERROR CYCLE POWER (CLJ 8500/8550)	The temperature/humidity sensor in the printer has malfunctioned. The temperature/humidity sensor is located below tray 2.	**1** Reconnect connector J801 and relay connector J55 on the temperature/humidity sensor, and connector J206 on the controller board. **2** If the error persists, replace the cassette cross member assembly, which includes the temperature/humidity sensor. **3** If the error persists, replace the controller board.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
54.2 PRINTER ERROR (CLJ 4500/4550)	A problem exists with the carousel assembly. Either the carousel is not rotating or the sensor has failed. Drive motor (M3) provides drive for the print cartridge carousel. If motion is not detected, a 54.2 error appears. M3 is a 6-phase stepping motor and receives its drive signal from J203 of the developing PCB. Photosensor PS10 monitors “movement” (and the position) of the print cartridge carousel. Different width tabs (four tabs, one for each cartridge) on the left-end of the carousel housing pass through PS10 to provide positioning information. The black print cartridge tab is the home position. Print cartridge position within the carousel is monitored by PS11. If PS11 fails or is incorrectly connected, a 54.2 error appears. Another indicator of this is that the carousel starts to rotate then stops immediately. A 54.2 error message can also occur if the sensor is installed backwards.	**1** Turn the printer off and then on to reset the printer. **2** Open the color print cartridge door and look for an obstruction. If necessary, remove the print cartridges individually by manually releasing the carousel brake and rotating the carousel around to each cartridge position and removing the cartridges. Turn the printer off and on to reset the printer. **Note** The printer *cannot* operate with the top cover removed unless the carousel brake has been released or removed. **3** Verify that the carousel drive motor wiring harness is firmly seated into connector J203 of the developing PCB. **4** Verify that PS10 is working correctly and not excessively dirty (clean if necessary) and that the wiring harness is firmly seated into both the sensor assembly and connector J206 of the developing PCB.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
54.2 PRINTER ERROR (CLJ 4500/4550) (continued)		**5** Verify that PS11 is connected and functioning correctly. **6** Verify that all connectors to the developing PCB and the DC controller PCB are firmly seated. **7** Verify that the rotary drive assembly is working. Replace it on older units that have more than 50K of life. The following URL provides help with cartridge installation and removal: http://www.hp.com/go/ljsupplies.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
54.2 CAROUSEL ERROR CYCLE POWER (CLJ 8500/8550)	The print cartridge carousel is not working correctly. This could be caused by an obstruction in the carousel path, such as a loose shutter or disengaged print cartridge. In very rare circumstances, this error can be caused by a broken gear on the rear of the carousel assembly or a broken position flag on the carousel gear.	**1** Turn the printer off and on to reset the printer. **2** Open the carousel door and waste-toner tray. Look for an obstruction, such as a print cartridge shutter catching on the waste-toner tray. Verify that the toner lock lever is fully locked. If the message does not clear after closing the doors, turn the printer off and on to reset the printer. **3** Clean the carousel position sensor (PS3) by using compressed air. If the problem persists, replace the sensor. **4** Reconnect connector J701 on carousel motor PCA; connectors J641, J642, J644, and J648 on the main relay PCA; connector J672 on the subrelay PCA; and connector J102 on the power supply. **5** Check operation of the carousel stopper arm. Replace the carousel stopper solenoid if necessary. **6** If the error persists, replace the carousel motor (M1). **7** If the error persists, replace the controller board.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
54.2 CAROUSEL ERROR CYCLE POWER (CLJ 8500/8550) (continued)		**8** Check the electrical continuity between connector J641-1 (+24 VB) and J642-3 (PMP) on the main relay PCA when the door switch (SW641) is turned on. If no electrical continuity exists, replace the main relay PCA. **9** Check the electrical continuity between connector J644-1 (PBK) and J644-2 (PMP) on the main relay PCA when the door switch (SW644) is turned on. If no electrical continuity exists, replace the black print cartridge on/off switch. **10** Check the electrical continuity between connector J642-1 (PYMC) and J642-2 (PBK) on the subrelay PCA when the door switch (SW673) is turned on. If no electrical continuity exists, replace the print cartridge cover switch in the subrelay PCA.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
54.2 CAROUSEL ERROR CYCLE POWER (CLJ 8500/8550) (continued)		**11** Check electrical continuity between connector J642-1 (PYMC) and J648-1 (+24 VAR) on the main relay PCA when the door switch (SW642) is turned on. If no electrical continuity exists, replace the main relay PCA. **12** Measure the voltage across connector J648-1 (+24 VAR) and J648-3 (GND) on the main relay PCA after the printer is turned on. If the voltage is not 24 V, replace the main relay PCA. **13** Reconnect connectors J704 and J706 on the carousel motor PCA, and connector J220 on the controller board. **14** Reconnect connector J43 on the carousel position sensor, and reconnect relay connector J42 and connector J207 on the controller board. **15** Measure the voltage across connector J220-A6 (RLSROT) and J220-B5 (GND) on the controller board after the printer is turned on. If the voltage changes to about 3.5 V from 0 V, replace the carousel motor PCA.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
54.3 PRINTER ERROR (CLJ 4500/4550)	The printer is not receiving data back from the density sensor (PS14) located in the bottom of the imaging drum drawer.	**1** Verify that the densitometer is clean; perform the toner density sensor cleaning procedure in chapter 7 of the online user guide. **2** Inspect the density sensor wiring harness for damage. The harness runs from the density sensor through the left-side upper control arm of the imaging drum drawer to J1010 of the DC controller PCB. Verify that the cable is firmly seated into the J1010 of the DC controller PCB. **3** If the error persists, replace the density sensor assembly.
54.3 CALIBRATION WARNING PRESS GO TO CONTINUE (CLJ 8500/8550)	The process marks in the density sensing pattern are corrupted.	**1** Press GO. **2** Print a configuration page and troubleshoot the error as an image-quality problem. **3** Check the transfer guide for cracks and replace the transfer guide as needed.
54.4 PRINTER ERROR (CLJ 4500/4550)	The optional equipment is not recognized.	Turn the printer off and then on to reset the printer.
54.4 WASTE TONER SENSOR ERROR CYCLE POWER (CLJ 8500/8550)	The waste-toner sensor has failed. Printing cannot continue.	**1** Replace the waste-toner sensor assembly. **2** Replace the imaging drum.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
54.5 PRINTER ERROR (CLJ 4500/4550)	A waste-toner sensor has malfunctioned.	**1** Turn the printer off and then on to reset the printer. **2** Remove the drum cartridge and clean the waste-toner detection window by using a dry cloth. **3** Clean the waste-toner sensor unit at the printer side by using a dry cloth. **4** Check the light guide and clean it if necessary. Replace the light guide if the ends are scarred. **5** Reconnect the waste-toner sensor unit connector and the DC controller PCB connector (J1009) correctly. **6** If the error persists, replace the waste-toner sensor (PS13).

Table 2-14 Numerical error messages (continued)

Message	Description	Action
54.6 PRINTER ERROR (CLJ 4500/4550)	The OHT sensor has reported an error condition. This can be caused by contamination in the connectors, a blocked sensor, or a defective sensor.	**1** Remove the ITB and verify that the OHT sensor prism is in place. **2** Lift the registration flap and verify that the OHT sensor is not blocked. **3** Remove the ITB drawer and inspect the drawer connectors for contamination such as a piece of media. **4** If the error persists, verify that all connectors are firmly seated. **5** If the error persists, replace the sensor. **6** If the error persists, replace the ITB drawer.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
54.X PRINTER ERROR (CLJ 4600, CLJ 5500)	X Description 1 temperature 2 carousel rotation error 3 Admix density sensor 5 CPR sensor 6 OHT sensor 7 yellow drum phase sensor 8 magenta drum phase sensor 9 cyan drum phase sensor 10 black drum phase sensor 11 yellow density sensor 12 magenta density sensor 13 cyan density sensor 14 black density sensor 15 yellow CPR sensor 16 magenta CPR sensor 17 cyan CPR sensor 18 black CPR sensor 19 ETB speed control sensor 20 CPR sensor 21 yellow toner remaining sensor 22 magenta toner remaining sensor 23 cyan toner remaining sensor 24 black toner remaining sensor 25 top sensor	Turn the printer off and then on, and then check items in the order listed. Check the indicated sensor. **54.1 error** Check the fuser. See 50.X Fuser error. **54.3 error** Check the connections. Replace the color registration detection assembly if necessary. **54.5 error** Check the connections. Replace the color registration detection assembly if necessary. **54.6 error** Check the connections. Replace the color registration detection assembly if necessary. **54.7, 54.8, 54.9, or 54.10 error** Check the connections. Replace the drum phase sensor for the indicated color if necessary. **54.11, 54.12, 54.13, or 54.14 error** Check the connections. Check the cartridge and replace it if necessary. Replace the color registration detection assembly if necessary. **54.19 error** Check the ETB connection. Replace the ETB, if necessary. Replace the DC controller if necessary.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
54.X PRINTER ERROR (CLJ 4600, CLJ 5500) (continued)		**54.20 error** Check the connection. Replace the color registration detection assembly. **54.21, 54.22, 54.23, or 54.24 error** Check the connections. Replace the toner level sensing PCB if necessary. Replace the DC controller if necessary.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
54.XX PRINTER ERROR (CLJ 3500/3700)	A printer command error has occurred. **Note** Some messages appear in the event log and some appear on both the control panel and in the event log, as identified in the followin list. **XX Description:** (Event log only messages) 01 - humidity environmental sensor error 05 - media sensor error 06 - Dmax density sensor out of range 11 - yellow density sensor error 12 - magenta density sensor error 13 - cyan density sensor error 14 - black density sensor error 15 - yellow CPR sensor error 16 - magenta CPR sensor error 17 - cyan CPR sensor error 18 - black CPR sensor error 20 - CPR sensor error	**1** Turn the printer off and then on again. **2** For the specific error messages, perform the indicated action: **54.01** - Environment Sensor Abnormality **1** The connector in the environment detection signal line is not correctly connected. Reseat the DC controller PCB connector J1015. **2** The environment sensor is defective. Replace the environment sensor. **3** The DC controller PCB is defective Replace the DC controller PCB. **54.05** - Media sensor error **1** Perform the steps for error 54.32, below. **2** Replace the media sensor. **3** Replace the DC controller.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
54.XX PRINTER ERROR (CLJ 3500/3700) (continued)	(Control panel and event log message) 21 - yellow toner remaining sensor error 22 - magenta toner remaining sensor error 23 - cyan toner remaining sensor error 24 - black toner remaining sensor error 31 - media sensor calibration failure (Event log only message) 32 - media sensor is not calibrated (event log only) **33.0X Scanner Beam Detect** adjustment abnormality warning X is the scanner number: 1 = yellow/magenta scanner 2 = cyan/black scanner	**54.06** **54.11** **54.12** **54.13** **54.14** **1** Perform a Calibrate Now procedure. **2** The DC controller is defective. Replace the DC controller PCB. **54.15** **54.16** **54.17** **54.18** **54.20** Color misregistration sensor abnormality **1** The connectors between the color misregistration sensor (CPR) and the DC controller PCB are not connected correctly. Reseat the color misregistration sensor (CPR) connectors (J505A, J505B) and the DC controller PCB connector J1012. **2** Faulty color misregistration sensor (CPR). Replace the color misregistration sensor (CPR). **3** Faulty DC controller PCB. Replace the DC controller PCB.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
54.XX PRINTER ERROR (CLJ 3500/3700) (continued)		**54.21** - **54.22** - **54.23** - **54.24** - Toner (Y/M/C/K) level sensor abnormality **1** The connectors in the toner level sensor control line are not connected correctly. Reseat the memory controller PCB connector J201 and the DC controller PCB connector J1025. **2** Faulty memory controller PCB. Replace the memory controller PCB. **3** Faulty DC controller PCB. Replace the DC controller PCB.
	54.30.XX (event log only) HP3700 only Halftone calibration error. XX Description: 06 - magenta data out of range. 07 - yellow data out of range. 08 - black data out of range. 09 - cyan data out of range.	**54.30.XX** Perform a **CALIBRATE NOW** in the CONFIGURE DEVICE / PRINT QUALITY menu on the printer control panel.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
54.XX PRINTER ERROR (CLJ 3500/3700) (continued)		**54.31** - Media Sensor Abnormality/ After-adjustment Value Out of Spec **1** Try to calibrate the media sensor again. **2** Dirty media sensor. Clean the media sensor. **3** The connectors in the media detection signal line are not correctly connected. Reseat the media sensor connector J601, relay connector J5026, and DC controller PCB connector J1008. **4** Defective media sensor. Replace the media sensor. **5** Defective DC controller PCB. Replace the DC controller PCB.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
54.XX PRINTER ERROR (CLJ 3500/3700) (continued)	**54.32 error:** The image density adjustment value, color misregistration adjustment value, and PWM adjustment value (see note) are stored in the EEPROM (NVRAM) of the formatter. Whenever a formatter or laser/scanner unit is replaced, you must calibrate the printer to update the values. a. Image density adjustment (on formatter replacement) b. Color misregistration adjustment (on formatter replacement) c. PWM adjustment (on both formatter and laser/scanner unit replacement) **Note** The PWM adjustment value enables reproduction of an image in the best tone. The formatter determines the value based on the amount of lase.	**54.32** Electrical Adjustment When the media sensor is replaced, the light intensity of the sensor must be adjusted. Follow the procedure below to adjust the light intensity. **1** Turn the printer off. **2** Open the front door. **3** While pressing down the engine test print switch, turn the printer on. **4** Close the front door. **5** Load paper into Tray 1 (use plain white paper for test printing). **6** As the printer goes into READY period, press the engine-test print switch and test print. **7** One sheet of paper will be fed into the printer from Tray 1 and will be delivered to the face-down delivery tray. **54.33** **1** Defective laser/scanner. Replace the laser/scanner unit. **2** Defective DC controller PCB. Replace the DC controller PCB.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
54.XX PRINTER ERROR (CLJ 9500)	**Note** The printer 54 errors indicate sensor abnormalities. Sensor abnormalities are caused by failed or blocked sensors, or sensors reporting results outside an expected range. Some 54 errors do not stop the printing process, and are only noted in the event log but *not* on the control panel. XX description **00** = ITB misalignment (check the event log for a 54.27 error and cycle power to recover) **01** = environmental temperature sensor output is abnormal (appears only in the event log) **05** = OHT sensor failure (appears only in the event log) **06** = density sensor failure	**54.01 procedure:** **1** Check that all of the environmental requirements are met. **2** Turn the printer off, and then turn the printer on again. **3** Check connector K3013 on the temperature/ humidity sensor, intermediate connector J3085, and connector J807 on the T driver PCA. **4** Replace the temperature/ humidity sensor (see the service manual for details). **5** Replace the T driver PCA (see the service manual for details). **6** Replace the DC controller PCA (see the service manual for details).

Table 2-14 Numerical error messages (continued)

Message	Description	Action
54.XX PRINTER ERROR (CLJ 9500) (continued)	**Note** For errors 11 through 14, the density is set to the highest or lowest possible value. This usually occurs because the calibration patches are not on the ITB correctly. These errors appear only in the event log. **11** = yellow density sensor (the engine detects abnormality in the yellow density control and the engine default is used) **12** = magenta density sensor (the engine detects abnormality in the magenta density control and the engine default is used) **13** = cyan density sensor (the engine detects abnormality in the cyan density control and the engine default is used) **14** = black density sensor (the engine detects abnormality in the black density control and the engine default is used) **Note** Errors 15 through 18 only appear in the event log and printing continues. **15** = yellow CPR sensor (the engine cannot detect the yellow CPR pattern on the ITB) **16** = magenta CPR sensor (the engine cannot detect the magenta CPR pattern on the ITB)	**54.06, 54.11, 54.12, 54.13, 54.14, and 54.30 procedure:** **1** Check the cleaning blade and ITB for evidence of a cleaning blade failure (which might cause the density calibration to fail). **2** Check the right door actuated cleaning mechanism for correct functionality. **3** Select CALIBRATE NOW and PRINT STOP TEST on the control panel to check correct formations of the calibration swatches on the ITB. If the swatches are light or missing a color, check the T1 components, image drum, and print cartridge for the missing or light color. Also, check for malformed or too light swatches, stray toner from cleaning failures, and ITB damage. **4** Check connector J3014 at the density sensor, intermediate connector J3072 and J3080, and connector J808 on the T driver PCA. **5** Replace the density/color registration sensor assembly (see the service manual for details).

Table 2-14 Numerical error messages (continued)

Message	Description	Action
54.XX PRINTER ERROR (CLJ 9500) (continued)	**17** = cyan CPR sensor (the engine cannot detect the cyan CPR pattern on the ITB) **18** = black CPR sensor (the engine cannot detect the black CPR pattern on the ITB) **20** = CPR sensor (output is abnormal or the engine cannot detect any of the CPR patterns on the ITB **Note** Errors 21 through 24 indicate a toner concentration sensor failure. **21** = yellow image drum t/d ratio sensor **22** = magenta image drum t/d ratio sensor **23** = cyan image drum t/d ratio sensor **24** = black image drum t/d ratio sensor **27** = ITB misalignment sensor **Note** 27 = ITB misalignment sensor appears in the event log, but it might appear as a 54.00 error on the control panel.	**6** Replace the T driver PCA (see the service manual for details). **7** Replace the DC controller PCA (see the service manual for details). **54.05 procedure:** **1** Clean the OHT sensor. **2** Check the transparency sensor for correct functionality. **3** Check connectors J3032 on the transparency sensor, intermediate connector J3027, and connector J121 on the DC controller PCA. **54.15, 54.16, 54.17, 54.18, and 54.20 procedure:** **1** Check the color and the tray 1 dependent items for the specified color. **2** Defeat the right side upper door (ITB access) interlocks and check during a calibration that the density patches are formed correctly on the ITB. **3** Print a laser alignment page to check for adjustable CPR problems.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
54.XX PRINTER ERROR (CLJ 9500) (continued)	**28** = clean density/CPR sensor warning (only appears in the event log) **Note** For error 28, the CLEAN SENSORS 54.28.01 (density sensor is dirty) or CLEAN SENSORS 54.28.02 (CPR sensor is dirty) appears on the event log. **29** = clean density/CPR sensor failed (only appears in the event log and CLEAN SENSORS appears on the control panel) **30** = halftone calibration error	**4** Check the cleaning blade and ITB for e evidence of a cleaning blade failure (which might cause the density calibration to fail), and check the ITB for damage. **5** Check the right door actuated cleaning mechanism for correct functionality. **6** Select CALIBRATE NOW and PRINT STOP TEST on the control panel to check correct formations of the calibration swatches on the ITB (set to 7,000 milliseconds for a CPR pattern check). If the swatches are light or missing a color, check the T1 components, image drum, and print cartridge for the missing or light color. Also, check for malformed or too light swatches, stray toner from cleaning failures, and ITB damage. **7** Check the ITB for smooth belt rotation and belt travel. Replace the ITB if movement problems or damage exists. **8** Check connector J3073 and J3074 at the CPR sensors, intermediate connector J3080, and connector J808 on the T driver PCA.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
54.XX PRINTER ERROR (CLJ 9500) (continued)		**9** Replace the DC controller PCA (see the service manual for details). **10** Replace the density/color registration sensor assembly (see the service manual for details). **11** Replace the T driver PCA (see the service manual for details). **54.21, 54.22, 54.23, and 54.24 procedure:** **1** Turn the printer off, and then turn the printer on again to clear the error. **2** Check the indicated image drum for damaged high-voltage contacts, and check the contacts for continuity to the high-voltage power supply. **3** Check the image drum high-voltage pins on the print engine. **4** Check the following connectors: ◆ Yellow: J3040 and J804 on the T driver PCA. ◆ Magenta: J3038 and J804 on the T driver PCA. ◆ Cyan: J3044 and J805 on the T driver PCA. ◆ Black: J3042 and J805 on the T driver PCA.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
54.XX PRINTER ERROR (CLJ 9500) (continued)		**5** Replace the indicated image drum (see the service manual for details). (Make sure that the printer is turned off, and then turned on again after the image drum is replaced.) **6** Replace the T driver PCA (see the service manual for details). **7** Replace the DC controller PCA (see the service manual for details). **54.27 and 54.00 procedure:** **1** Remove the ITB and check the belt for correct alignment and movement. **2** Replace the ITB and seat it correctly. **3** Check connector J3075 and J618 on the P driver PCA. **4** Replace the ITB (see the service manual for details). **5** Replace the P driver PCA (see the service manual for details). **6** Replace the DC controller PCA (see the service manual for details).

Table 2-14 Numerical error messages (continued)

Message	Description	Action
54.XX PRINTER ERROR (CLJ 9500) (continued)		**54.28 procedure:** **1** Make sure that the density/color sensor shutter is in the open position when the front right door is closed. **2** Open and close the front right door to clean the sensor assembly. **3** Adjust or replace the sensor cleaning assembly that is actuated by the front right door. **4** Replace the density/color registration sensor assembly (see the service manual for details). **54.29 procedure:** **1** Check the right door actuated cleaning mechanism for correct functionality. **2** Adjust or replace the sensor cleaning assembly that is actuated by the front right door. **3** Replace the density/color registration sensor assembly (see the service manual for details).

Table 2-14 Numerical error messages (continued)

Message	Description	Action
55.X PRINTER ERROR (CLJ 3500/3700) alternates with TO CONTINUE TURN OFF THEN ON	The DC controller is not communicating with the formatter. The problem could be caused by a timing error or an intermittent connection. (Event log only) 55.01.00 - DC controller memory error. 55.5 - HP 3700 only - A job was sent while Resend Upgrade is on the display.	**1** Press to continue. **2** If the message persists, turn the printer off and then on again. **3** Reseat or replace the connectors between the DC controller and the formatter. **4** If the problem persists, replace the DC controller PCB. **5** Replace the formatter. For the following specific error, perform indicated action. **55.01.00** - Replace the DC controller PCB. **55.5** - Do not replace the DC controller PCB or formatter PCB. Resend the firmware upgrade before sending any more print jobs.
55 DC CONTROLLER ERROR (CLJ 4500/4550) 55.X PRINTER ERROR FOR HELP PRESS ? alternates with 55.X PRINTER ERROR TO CONTINUE PRESS ✓ (CLJ 4600, CLJ 5500)	The print engine is not communicating with the formatter. The communication link between the formatter and DC controller was lost. This can occur because of a timing error or intermittent connection between the formatter and DC controller.	**1** Turn the printer off and on to reset the printer. **2** Reseat the connectors between the formatter and DC controller. **3** If the problem persists, replace the DC controller PCB. Calibrate the printer after replacing the DC controller. **4** Replace the formatter if necessary. Initialize NVRAM.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
55 PRINTER ERROR CYCLE POWER (CLJ 8500/8550)	Indicates a printer command error. The commands cannot be exchanged between the printer and its controller.	**1** Turn the printer off and on to reset the printer. **2** Verify that the controller board is fully seated.
55.XX PRINTER ERROR alternates with TO CONTINUE CYCLE POWER (CLJ 9500)	The engine is not communicating with the formatter. The communication link between the formatter and the DC controller PCA is lost.	**1** Turn the printer off, and then turn the printer on again to clear the error. **2** Turn the printer off and reseat the formatter. **3** Print a configuration page to make sure that the formatter has the latest firmware image. If it does not, perform a flash upgrade. **4** Check the connectors on the FFC between the formatter cage and the DC controller PCA. **5** Replace the DC controller PCA (see the service manual for details). **6** Replace the formatter (see the service manual for details).
56.1 ERROR CYCLE POWER (CLJ 8500/8550)	An input feed error (such as requesting to feed transparencies through the duplexer) has occurred, or the input tray is not installed.	**1** If the input tray you are trying to print from is not installed, install the input tray. **2** Turn the printer off and on to reset the printer.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
56.2 ERROR CYCLE POWER (CLJ 8500/8550)	An illegal output error has occurred. For example, the multi-bin mailbox is not installed and it was selected as the output destination, or transparencies are present in the duplexer.	**1** Open the printer and remove media from the paper path. **2** Verify that the media type is set in the printer control panel. **3** Turn the printer off and on to reset the printer.
56.X PRINTER ERROR alternates with TO CONTINUE CYCLE POWER	A temporary printer error occurred.	**1** Turn the printer off, and then turn the printer on again to clear the error. **2** Turn the printer off and reseat the formatter. **3** Print a configuration page to make sure that the formatter has the latest firmware image. If it does not, perform a flash upgrade. **4** Check the connectors on the FFC between the formatter cage and the DC controller PCA. **5** Replace the DC controller PCA (see the service manual for details). **6** Replace the formatter (see the service manual for details).

Table 2-14 Numerical error messages (continued)

Message	Description	Action
57.1 FAN FAILURE (CLJ 4500/4550)	The printer detected that the fan (an exhaust fan located in the upper, left rear corner of the printer) is not rotating. This fan operates off +24 Vdc and is controlled by the DC controller PCB microprocessor.	**1** Turn the printer off and on to reset the printer. Visually check to see if the fan is rotating (if you cannot see any rotation, place your hand over the outlet vents to feel whether exhaust air is moving). **2** Remove the printer's left-side cover. Check to see if anything is preventing the fan from rotating freely. **3** Verify that the fan's connector is firmly seated into connector J208 of the developing PCB. **4** If the error persists, replace the fan.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
57.1 FAN FAILURE (CLJ 8500/8550)	Fan 1 (FM1) has failed or is obstructed.	**CAUTION** Turn the printer off and do not operate the printer in this condition to prevent serious damage. **1** Turn the printer off and on to reset it. **2** Reconnect connectors J702 and J706 on the carousel motor PCA, and connector J220 on the controller board. **3** Reconnect connector J701 on the carousel motor PCA, connectors J648 and J641 on the main relay PCA, and connector J102 on the DC power supply. **4** Measure the voltage across J702-3 (FAN1ON) and J701-2 (GND) on the carousel motor PCA after the printer is turned on. If the voltage changes from 0 V to 24 V, replace fan 1. **5** Measure the voltage across connector J701-1 (+24 VB) and J701-2 (GND) on the carousel motor PCA after the printer is turned on. If the voltage is about 24 V, replace the carousel motor.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
57.1 FAN FAILURE (CLJ 8500/8550) (continued)		**6** Measure the voltage across connector J641-1 (+24 VB) and J641-4 (GND) on the main relay PCA after the printer is turned on. If the voltage is not 24 V, replace the main relay PCA. **7** Check the ac power supply. **8** If the problem is not corrected after the printer is turned off and on again, find the cause of activation of the overcurrent/overvoltage detection circuit in the power supply. Wait more than two minutes before turning the power on again. **9** If the error persists, replace the power supply.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
57.2 FAN FAILURE (CLJ 4500/4550)	The printer detected that the fan (an exhaust fan located in the upper, right rear corner of the printer) is not rotating. This fan operates off +24 Vdc and is controlled by the DC controller PCB microprocessor.	**1** Turn the printer off and on to reset the printer. Visually check to see if the fan is rotating (if you cannot see any rotation, place your hand over the outlet vents to feel whether exhaust air is moving). **2** Remove the left-side cover. Check to see if anything is preventing the fan from rotating freely. **3** Verify that the fan's connector is firmly seated into connector J208 of the developing PCB. **4** If the error persists, replace the fan.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
57.2 FAN FAILURE (CLJ 8500/8550)	Fan 2 (FM 2) has failed or is obstructed.	**CAUTION** Turn the printer off and do not operate the printer in this condition to prevent serious damage. **1** Turn the printer off and on to reset it. **2** Reconnect connectors J703 and J706 on the carousel motor PCA, and reconnect connector J220 on the controller board. **3** Reconnect connector J701 on the carousel motor PCA, connector J648 on the main relay PCA, and connector J102 on the DC power supply. **4** Measure the voltage across connector J703-3 (FAN2ON) and J703-1 (GND) on the carousel motor PCA after the printer is turned on. If the voltage changes from 0 V to 24 V, replace fan 2. **5** Measure the voltage across connector J701-1 (+24 VB) and J701-2 (GND) on the carousel motor PCA after the printer is turned on. If the voltage is about 24 V, replace the carousel motor.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
57.2 FAN FAILURE (CLJ 8500/8550) (continued)		**6** Measure the voltage across connector J641-1 (+24 VB) and J641-4 (GND) on the main relay PCA after the printer is turned on. If the voltage is 24 V, replace the main relay PCA. **7** Check the ac power supply. **8** If the problem is not corrected after the printer is turned off and on again, find the cause of activation of the overcurrent/overvoltage detection circuit in the power supply. Wait more than two minutes before turning the printer on again. **9** If the error persists, replace the power supply.
57.3 FAN ERROR alternates with CLOSE UPPER FRONT DRAWER (CLJ 4500/4550)	The intake fan is located in the front, center of the drum drawer. (The drum drawer is referred to as the upper front drawer for end-users.) Fan rotation stops when the drawer is opened. A fan error message appears when fan motion is *not* detected by the DC controller's microprocessor if the drawer is closed and the printer is not in PowerSave mode.	**1** Turn the printer off and then on to reset the printer. Because the fan is difficult to see, listen to hear if the fan is rotating. **2** Verify that FM3 connector 27 is not damaged or broken. Verify that the fan connector is firmly seated into connector J1022 of the DC controller PCB. **3** Verify that the fan connector is firmly seated into connector J1022 of the DC controller PCB. **4** If the error persists, replace the fan.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
57.3 FAN FAILURE (CLJ 8500/8550)	Fan 3 (FM 3) has failed or is obstructed.	**CAUTION** Turn the printer off and do not operate the printer in this condition to prevent serious damage. **1** Turn the printer off and on to reset it. **2** Reconnect connectors J645 and J647 on the main relay PCA, J18 and J74 relay connectors, and connector J227 on the controller board. **3** Reconnect connector J641 on the main relay PCA, and connector J102 on the power supply. **4** Measure the voltage across J645-3 (FAN3ON) and J645-1 (GND) on the main relay PCA after the printer is turned on. If the voltage changes from 0 V to 24 V, replace fan 3. **5** Measure the voltage across connector J641-1 (+24 VB) and J641-4 (GND) on the main relay PCA after the printer is turned on. If the voltage is not 24 V, replace the main relay PCA. **6** If the error persists, replace the controller board.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
57.3 FAN FAILURE (CLJ 8500/8550) (continued)		**7** Measure the voltage across connector J641-1 (-24 VB) and J641-4 (GND) on the main relay PCA after the printer is turned on. If the voltage is not 24 V, replace the main relay PCA. **8** Check the ac power supply. **9** If the problem is not corrected after the printer is turned off and on again, find the cause of activation of the overcurrent/overvoltage detection circuit in the power supply. Wait more than two minutes before turning the printer on again.
57.4 PRINTER ERROR alternates with TO CONTINUE TURN OFF THEN ON (CLJ 3500/3700)	A printer fan error has occurred as a result of a faulty fan connection, fan or DC controller.	**1** Turn the printer off and then on again. **2** Reseat the DC controller PCB connector J1024. **3** Replace the fan. **4** Replace the DC controller PCB.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
57.X PRINTER ERROR TO CONTINUE TURN OFF THEN ON (CLJ 4600)	A printer fan error has occurred. X Description 3 cartridge fan (vertical fan, F2) 4 formatter fan (horizontal fan, F1)	Turn the printer off and then on. **57.3 Cartridge fan (F2)** **1** Reconnect the connector J1004 on the DC controller PCB. **2** Immediately after starting the print operation, measure the voltage between pins 1 and 3 on the J1004 connector. If the voltage changes from 0 V to12 V or 24 V, replace the cartridge fan. **3** If the error persists, replace the DC controller PCB. Calibrate the printer after replacing the DC controller. **57.4 Formatter fan (F1)** **1** Reconnect the connector J1003 on the DC controller PCB. **2** Immediately after turning the printer on, measure the voltage between pins 1 and 3 on the J1004 connector. If the voltage changes from 0 V to 24 V, replace the formatter fan. **3** If the error persists, replace the DC controller PCB. Calibrate the printer after replacing the DC controller.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
57.X PRINTER ERROR TO CONTINUE TURN OFF THEN ON (CLJ 5500)	X Description 3 cartridge fan (vertical fan, FM3) 4 formatter fan (horizontal fan, FM2) 7 power supply fan (FM1)	Turn the printer off and then on. **57.3 Cartridge fan (FM3)** **1** Reconnect the connectors J10 for the cartridge fan and J1102 on the DC controller PCB. **2** Immediately after starting the print operation, measure the voltage between pins 1 and 3 on the J10 connector. If the voltage changes from 0 V to 12 V or 24 V, replace the cartridge fan. **3** If the error persists, replace the DC controller PCB. Calibrate the printer after replacing the DC controller. See “Calibrate Now (CLJ 3500/3700, CLJ 4600, and CLJ 5500 only)” on page 263. **57.4 Formatter fan (FM2)** **1** Reconnect the connectors J11 for the formatter fan and J1102 on the DC controller PCB. **2** Immediately after turning the printer on, measure the voltage between pins 4 and 6 on the J1102 connector. If the voltage changes from 0 V to 12 V or 24 V, replace the formatter fan.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
57.X PRINTER ERROR TO CONTINUE TURN OFF THEN ON (CLJ 5500) (continued)		**57.7 Power supply fan (FM2)** **1** Reconnect the connectors J1104 and J1133 on the DC controller PCB. **2** Disconnect the connector J1133. **3** Immediately after turning the printer on, measure the voltage between pins 1 and 3 on the J1133 connector. If the voltage changes from 0 V to 12 V or 24 V, replace the power supply fan. **4** If the error persists, replace the low-voltage power supply. **5** If the error persists, replace the DC controller PCB. Calibrate the printer. after replacing the DC controller.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
57.X0 PRINTER ERROR (CLJ 9500)	The printer detects that a fan motor has failed. X description 1 = cartridge fan (FM 3) 3 = low-voltage power supply fan (FM5) 5 = face-up delivery paper path fans (FM1 or FM6) 6 = paper-path fan (FM2) 7 = fuser fan (FM4) 9 = ozone/exhaust fan (FM7)	**1** Turn the printer off, and then turn the printer on again to clear the error. **2** Check the indicated fan, and check for correct movement of the blades and motor. **3** Check the connectors that apply to the X error: 1: J3078 and J820 on the T driver PCA. 3: J3 on the low-voltage power supply, and J102 on the DC controller PCA. 5: J3079 and J3087 at the fans, intermediate connector J086, and J811 on the T driver PCA. 6: J818 on the T driver PCA. 7: J819 on the T driver PCA. 9: J3089 at the fan, and J823 on the T driver PCA. **4** Check connector J1 on the low-voltage power supply, J210 and J202 on the high-voltage power supply, J608 and J612 on the P driver PCA, and J806 on the T driver PCA. **5** Replace the fan if voltage is supplied to it at power on and it fails (see the service manual for details).

Table 2-14 Numerical error messages (continued)

Message	Description	Action
57.X0 PRINTER ERROR (CLJ 9500) (continued)		**6** Replace the T driver PCA (see the service manual for details). **7** Replace the DC controller PCA if X = 3 (FM5) (see the service manual for details).
58.1 ERROR CYCLE POWER (CLJ 8500/8550)	The paper diverter inside the upper-right door is out of position, causing an error in feeding from tray 1.	**1** Open the upper-right door and check for a jam or misfed media. **2** Turn the printer off and on to reset the printer.
58.X PRINTER ERROR FOR HELP PRESS **?** alternates with 58.X PRINTER ERROR TO CONTINUE TURN OFF THEN ON (CLJ 4600, CLJ 5500)	A memory tag error was detected. X Description 3 CPU 4 power supply	**1** Turn the printer off and then on. **2** If the error persists, replace the memory PCB. **3** If the error persists, replace the DC controller PCB. Calibrate the printer after replacing the DC controller.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
58.X0 PRINTER ERROR alternates with TO CONTINUE CYCLE POWER (CLJ 9500)	A printer error occurred where a memory tag CPU error was detected Cycle power to continue. X description: 1 = N/A 2 = air temperature sensor 3 = CPU 4 = power supply	**1** Turn the printer off, and then turn the printer on again to clear the error. **2** If the error persists, reseat the print cartridges and the image drums. **3** Check the memory tag on the consumables for damage. Replace the consumable if it is damaged. **4** Check the antenna assemblies for each consumable, and the connections to the memory board. **5** Replace the memory board. **6** Replace the DC controller PCA (see the service manual for details).

Table 2-14 Numerical error messages (continued)

Message	Description	Action
59.X MOTOR ERROR CYCLE POWER (CLJ 8500/8550)	The main motor (M4) is not working correctly. X Description 0 general error 1 startup error 2 rotation error	**1** Turn the printer off and on to reset the printer. **2** Reconnect connector J219 and relay connector J1 on the controller board. **3** Replace the main motor (M4). **4** Reconnect connectors J641 to J643 and J647 on the main relay PCA, connectors J671 and J673 on the subrelay PCA, connector J102 on the power supply, and connector J227 on the controller board. **5** Check electrical continuity between connector J641-1 (+24 VB) and J642-3 (PMP) on the main relay PCA when the door switch (SW641) is turned on. If no electrical continuity exists, replace the main relay PCA.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
59.X MOTOR ERROR CYCLE POWER (CLJ 8500/8550) (continued)		**6** Check electrical continuity between connector J671-2 (PMP) and J671-2 (PFUPR) on the subrelay PCA when the door switch (SW671) is turned on. If no electrical continuity exists, replace the subrelay PCA. **7** Measure the voltage across connector J647-B11 (+24 UH) and J647-4 (GND) on the main relay PCA after the printer is turned on. If the voltage is not 24 V, replace the main relay PCA. **8** If the error persists, replace the controller board.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
59.XY PRINTER ERROR alternates with TO CONTINUE TURN OFF THEN ON (CLJ 3500/3700)	A printer motor error has occurred. X and Y are detailed below. **X Description:** 5 - Primary transfer roller engaging motor (M5) startup error. 6 - Primary transfer roller engaging motor (M5) rotation error. 7 - Developer motor (M4) startup error. 8 - Developer motor (M4) rotation error. 9 - Drum motor (M3) startup error. 9 - (when Y is also 9) - Secondary transfer engaging mechanism error. A - Drum motor (M3) rotation error C - Delivery motor (M2) rotation error **Y Description:** 0 - No color K - Black C - Cyan M - Magenta Y - Yellow	Turn the printer off and then on again. For the following errors perform the indicated action: **59.7Y** and **59.8Y** Error on control panel: Error occurred when the developing motor started or while the developing motor was rotating. For all the following errors perform the actions listed below **59.5Y** and **59.6Y** Error on control panel: **59.05.00** and **59.06.00** Error on Event log only: An error occurred when the primary transfer roller engaging motor started or while the motor is rotating. 1. The connectors in the primary transfer roller engaging motor drive signal line are not connected correctly. Reseat the motor connector J5005 and the DC controller PCB connector J1014. 2. Faulty primary transfer roller engaging motor. Replace the motor. 3. Faulty DC controller PCB. Replace the DC controller PCB.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
59.XY PRINTER ERROR alternates with TO CONTINUE TURN OFF THEN ON (CLJ 3500/3700) (continued)		**59.7Y** Control-panel message: **59.07.00** (HP 3700 only; event log only): **59.07.ZZ** (HP 3500 only; event log only): **ZZ is color:** 00 - Black 01 - Cyan 02 - Magenta 03 - Yellow **59.8Y** Control-panel message: **59.08.00** (HP 3700 only; event log ly): **59.08.ZZ** - (HP 3500 only; event log only): **ZZ is color:** 00 - Black 01 - Cyan 02 - Magenta 03 - Yellow **1** The connectors in the developing motor drive signal line are not connected correctly. Reseat the developing motor connector J5006 and the DC controller PCB connector J1019. **2** Faulty developing motor. Replace the developing motor. **3** Faulty DC controller PCB. Replace the DC controller PCB.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
59.XY PRINTER ERROR alternates with TO CONTINUE TURN OFF THEN ON (CLJ 3500/3700) (continued)		**59.90** and **59.A0** Errors on control panel: **59.09.00** (event log only): **59.10.00** (event log only): An error occurred when the drum motor started or while the drum motor was rotating. **1** The connectors in the drum motor drive signal line are not connected correctly. Reseat the drum motor connector J5002 and the DC controller PCB connector J1019. **2** Faulty drum motor. Replace the drum motor. **3** Faulty DC controller PCB. Replace the DC controller PCB. **59.99.00** (event log only): An error occurred in the secondary transfer engaging mechanism. **1** Replace the secondary transfer engagement sensor. **2** Faulty secondary transfer engaging solenoid. Replace the secondary transfer engaging solenoid. **3** Replace the feed motor. **4** Replace the DC controller PCB.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
59.XY PRINTER ERROR alternates with TO CONTINUE TURN OFF THEN ON (CLJ 3500/3700) (continued)		**59.C0** Error on control panel: **59.12.00** (event log only): An error occurred in the developing engaging mechanism. **1** The movement of the developing engaging lever is not smooth. Make the movement of the lever smooth. Replace the gear for the lever, if damaged. **2** Check each drive gear between the delivery motor and the developing engaging clutch. Replace any, if damaged. **3** Faulty developing engaging sensor lever Reseat the developing engaging sensor lever to the correct position if its movement is not smooth or it is out of position. Replace the lever if it is damaged or deformed. **4** Faulty developing engaging sensor. Replace the developing engaging sensor. **5** The connectors in the developing engaging clutch drive signal line are not connected correctly. Reseat the connectors J5014 and J1019 between the developing engaging clutch and the DC controller PCB.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
59.XY PRINTER ERROR alternates with TO CONTINUE TURN OFF THEN ON (CLJ 3500/3700) (continued)		**6** The connectors in the delivery motor drive signal line are not connected correctly. Reseat the connectors J5004 and J1016 between the delivery motor and the DC controller PCB. **7** Faulty developing engaging clutch. Replace the developing engaging clutch. **8** Faulty delivery motor. Replace the delivery motor. **9** Faulty DC controller PCB. Replace the DC controller PCB.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
59.XY PRINTER ERROR FOR HELP PRESS ? alternates with 59.XY PRINTER ERROR TO CONTINUE TURN OFF THEN ON (CLJ 4600, CLJ 8500/ 8550)	A printer motor error has occurred. X Description 0 motor error 1 motor startup error 2 motor rotation error 3 fuser motor startup error 4 fuser motor rotation error 5 print cartridge motor startup error 6 print cartridge motor rotation error 9 ETB motor startup error A ETB motor rotation error B developing disengaging motor startup error C developing disengaging motor rotation error Y Description 0 no color K black C cyan M magenta Y yellow	**1** Turn the printer off and then on. **2** This message might also appear if the transfer unit is missing or incorrectly installed. Ensure that the transfer unit is correctly installed. **CLJ 4600** **ETB motor error** **1** Clean the ETB unit intermediate connector, J4017. If the connector is damaged, replace it. **2** Reconnect the connectors J4022 for the ETB motor, J4017 between the ETB and the printer, and J4014 on the DC controller PCB. **3** If the error persists, replace the ETB motor. **4** If the error persists, replace the DC controller PCB. Calibrate the printer after replacing the DC controller.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
59.XY PRINTER ERROR FOR HELP PRESS ? alternates with 59.X Y PRINTER ERROR TO CONTINUE TURN OFF THEN ON (CLJ 4600, CLJ 8500/ 8550) (continued)		**Fuser motor error** **1** Reconnect the connectors J4030 for the fuser motor and J1002 on the DC controller PCB. Replace any damaged parts. **2** If the error persists, replace the fuser drive assembly. **3** If the error persists, replace the DC controller PCB. Calibrate the printer after replacing the DC controller. **Print cartridge motor error** **1** Reconnect the print cartridge connector on the DC controller PCB (J1013 for cyan, J1031 for magenta, J1032 for yellow, and J1033 for black). **2** If the error persists, replace the drum drive assembly for the indicated print cartridge. **3** If the error persists, replace the DC controller PCB. Calibrate the printer after replacing the DC controller.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
59.XY PRINTER ERROR FOR HELP PRESS ? alternates with 59.XY PRINTER ERROR TO CONTINUE TURN OFF THEN ON (CLJ 4600, CLJ 8500/ 8550) (continued)		**Developing disengaging motor error** **1** Reconnect the connectors J4024 and J1019 between the developing disengaging motor and the DC controller PCB. **2** If the error persists, replace the developing disengaging drive assembly. **3** If the error persists, replace the DC controller PCB. Calibrate the printer after replacing the DC controller. **CLJ 5500** **1** Turn the printer off and then on. **2** This message might also appear if the transfer unit is missing or incorrectly installed. Ensure that the transfer unit is correctly installed. **ETB motor error** **1** Clean the ETB unit intermediate connector, J36. If the connector is damaged, replace it. **2** Reconnect the connectors J38 for the ETB motor and J1111 on the DC controller PCB.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
59.XY PRINTER ERROR FOR HELP PRESS **?** alternates with 59.X Y PRINTER ERROR TO CONTINUE TURN OFF THEN ON (CLJ 4600, CLJ 8500/ 8550) (continued)		**3** If the error persists, replace the ETB motor. **4** If the error persists, replace the DC controller PCB. Calibrate the printer after replacing the DC controller. See “Calibrate Now (CLJ 3500/3700, CLJ 4600, and CLJ 5500 only)” on page 263. **Fuser motor error** **1** Reconnect the connectors J18 for the fuser motor and J1101 on the DC controller PCB. Replace any damaged parts. **2** If the error persists, replace the fuser drive assembly. **3** If the error persists, replace the DC controller PCB. Calibrate the printer after replacing the DC controller. See “Calibrate Now (CLJ 3500/3700, CLJ 4600, and CLJ 5500 only)” on page 263. **Print cartridge motor error** **1** Reconnect the print cartridge connector on the DC controller PCB (J1124 for cyan, J1126 for magenta, J1125 for yellow, and J1127 for black).

Table 2-14 Numerical error messages (continued)

Message	Description	Action
59.XY PRINTER ERROR FOR HELP PRESS **?** alternates with 59.XY PRINTER ERROR TO CONTINUE TURN OFF THEN ON (CLJ 4600, CLJ 8500/ 8550) (continued)		**2** If the error persists, replace the drum drive assembly for the indicated print cartridge. **3** If the error persists, replace the DC controller PCB. Calibrate the printer after replacing the DC controller. See “Calibrate Now (CLJ 3500/3700, CLJ 4600, and CLJ 5500 only)” on page 263. **Developing disengaging motor error** **1** Reconnect the connectors J16 for the developing disengaging motor and J1100 for the DC controller PCB. **2** If the error persists, replace the developing disengaging drive assembly. **3** If the error persists, replace the DC controller PCB. Calibrate the printer after replacing the DC controller.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
59.XY PRINTER ERROR alternates with TO CONTINUE CYCLE POWER (CLJ 9500)	The printer detects a motor that fails to turn or fails to turn at speed. X description 0 = motor error (*not* possible for the HP color LaserJet 9500) 1 = motor startup error 2 = motor rotation error 3 = fuser motor startup error 4 = fuser motor rotation error 5 = image drum motor startup error 6 = image drum motor rotation error 8 = developer motor failure 9 = ITB motor startup error A = ITB motor rotation error D = registration motor starting error E = registration motor rotation error **Note** 59.XY errors with X = A, D, or E noted in the log appear as 59.10.00, 59.13.00, and 59.14.00 respectively (59.XX.YY), where XX is a decimal conversion of the hexadecimal control-panel display error.	**Note** If turning the printer off and on again does not resolve the 59.00 or 59.A0 error, remove and reinstall the image transfer cleaner. **Print cartridge motor errors (remove and shake)** There are no 59 errors associated with the print cartridge motor errors. When the engine reports a fail to rotate for these motors, the error REMOVE AND SHAKE <COLOR> CARTRIDGE appears. **1** Remove and check the indicated print cartridge. Check the engine for damaged drive linkages. **2** Gently shake the print cartridge, reseat it, and turn the printer on. **3** Turn the printer off, and then turn the printer on again to clear the error. **4** Use the hardware diagnostic tools from the control panel to test each motor for correct functionality. **5** Check connector J1 on the low-voltage power supply, J210 and J202 on the high-voltage power supply, J608 and J612 on the P driver PCA, and J806 on the T driver PCA.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
59.XY PRINTER ERROR alternates with TO CONTINUE CYCLE POWER (CLJ 9500) (continued)		**6** Replace the print cartridge and the drive linkages if necessary. **Note** Make sure that the print cartridges, when stored, were not exposed to high temperatures. **7** Check connector 814 on the T driver PCA. **8** Check the color-appropriate connectors: ◆ K: J3046 near the motor ◆ C: J3047 near the motor ◆ M: J3048 near the motor ◆ Y: J3049 near the motor **9** Replace the T driver PCA (see the service manual for details). **10** Replace the DC controller PCA (see the service manual for details). **Fuser motor errors** **1** Turn the printer off, and then turn the printer on again to clear the error. **2** Remove and check the fuser for jammed media and damaged drive gears. **3** Perform a motor diagnostics test.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
59.XY PRINTER ERROR alternates with TO CONTINUE CYCLE POWER (CLJ 9500) (continued)		**4** Check connector J3035 at the fuser motor and connector J116 on the DC controller PCA. **5** Check the fuser drive train for correct movement. Replace the fuser drive train if necessary. **6** Replace the fuser motor. (see the service manual for details). **7** Replace the DC controller PCA (see the service manual for details). **Image drum motor errors** **1** Gently shake the print cartridge, reseat it, and turn the printer on. **2** Turn the printer off, and then turn the printer on again to clear the error. **3** Remove and check the indicated image drum, and check the engine for damaged drive linkages. **4** Reseat the image drum. **5** Replace the image drum and the drive linkages if necessary. **6** Check connector J1 on the low-voltage power supply, J210 and J202 on the high-voltage power supply, J608 and J612 on the P driver PCA, and J806 on the T driver PCA.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
59.XY PRINTER ERROR alternates with TO CONTINUE CYCLE POWER (CLJ 9500) (continued)		**Note** Make sure that the print cartridges, when stored, were not exposed to high temperatures. **7** Check FFC connectors J104 and J105 on the DC controller PCA, and connectors J601 and J616 on the P driver PCA (especially if the printer has been serviced recently). **8** Make sure that the FFC is centered and that it is completely inserted into the connector. Replace the FFC if it is damaged. **9** Check the color-appropriate connectors: ◆ K: J610 and J613 on the P driver PCA, J701K for the encoder, and J3097 on the motor ◆ C: J607 and J614 on the P driver PCA, J701C for the encoder, and J3095 on the motor ◆ M: J605 and J615 on the P driver PCA, J701M for the encoder, and J3093 on the motor ◆ Y: J603 and J617 on the P driver PCA, J701Y for the encoder, and J3091 on the motor

Table 2-14 Numerical error messages (continued)

Message	Description	Action
59.XY PRINTER ERROR alternates with TO CONTINUE CYCLE POWER (CLJ 9500) (continued)		**10** Check the process cartridge drive assembly encoders and motors for correct functionality. Replace the encoders and motors if necessary. **11** Replace the process cartridge drive assembly (see the service manual for details). **12** Replace the DC controller PCA (see the service manual for details). **Registration motor errors** **1** Turn the printer off, and then turn the printer on again to clear the error. **2** Use the hardware diagnostic tools from the control panel to test the registration motor for correct functionality. **3** Check the registration motor drive linkages for correct functionality. Replace the linkages if necessary **4** Check connector J3036 at the registration motor and connector J117 on the DC controller PCA. **5** Replace the registration motor (see the service manual for details). **6** Replace the DC controller PCA (see the service manual for details).

Table 2-14 Numerical error messages (continued)

Message	Description	Action
59.XY PRINTER ERROR alternates with TO CONTINUE CYCLE POWER (CLJ 9500) (continued)		**Developer motor errors** **1** Turn the printer off, and then turn the printer on again to clear the error. **2** Remove and check the indicated image drum, and check the engine for damaged drive linkages. **3** Reseat the image drum and turn the printer on. **4** Use the hardware diagnostic tools from the control panel to test each motor for correct functionality. **5** Replace the image drum and the drive linkages if necessary. **6** Check connector J1 on the low-voltage power supply, J210 and J202 on the high-voltage power supply, J608 and J612 on the P driver PCA, and J806 on the T driver PCA. **7** Check FFC connectors J104 and J105 on the DC controller PCA, and connectors J601 and J616 on the P driver PCA (especially if the printer has been serviced recently). **8** Make sure that the FFC is centered and that it is completely inserted into the connector. Replace the FFC if it is damaged.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
59.XY PRINTER ERROR alternates with TO CONTINUE CYCLE POWER (CLJ 9500) (continued)		**9** Check the color-appropriate connectors: ◆ K: J609 on the P driver PCA, and J3096 on the motor ◆ C: J606 on the P driver PCA, and J3094 on the motor ◆ M: J604 on the P driver PCA, and J3092 on the motor ◆ Y: J602 on the P driver PCA, and J3090 on the motor **10** Check the process cartridge drive assembly encoders and motors for correct functionality. **11** Replace the process cartridge drive assembly (see the service manual for details). **12** Replace the DC controller PCA (see the service manual for details). **Registration motor error** **1** Turn the printer off, and then turn the printer on again to clear the error. **2** Check the registration assembly for damage or jammed media. **3** Check the gear train on the registration drive assembly for correct functionality.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
59.XY PRINTER ERROR alternates with TO CONTINUE CYCLE POWER (CLJ 9500) (continued)		**4** Use the hardware diagnostic tools from the control panel to test each motor for correct functionality. **5** Check connector J3036 on the registration motor, and connector J117 on the DC controller PCA. **6** Use the hardware diagnostic tools from the control panel to test each motor for correct functionality. **7** Check connector J3036 on the registration motor, and connector J117 on the DC controller PCA. **8** Replace the registration motor (see the service manual for details). **9** Replace the DC controller PCA (see the service manual for details). **ITB motor error** **1** Turn the printer off, and then turn the printer on again to clear the error. **2** Partially remove the ITB. **3** Turn the fly wheel on the right side to check the ITB for damage and correct movement. Check the drive linkages from the ITB motor for damage. Replace any damaged hardware.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
59.XY PRINTER ERROR alternates with TO CONTINUE CYCLE POWER (CLJ 9500) (continued)		**4** Reseat the ITB and raise the green lever. **5** Use the hardware diagnostic tools from the control panel to test the ITB motor for correct functionality. **6** Remove and reseat the secondary transfer roller and the cleaning blade/ toner collection bottle. **7** Check connector J1 on the low-voltage power supply, J210 and J202 on the high-voltage power supply, J608 and J612 on the P driver PCA, and J806 on the T driver PCA. **8** PCA malfunction (especially if the printer was recently serviced). **9** Make sure that the FFC is centered and that it is completely inserted into the connector. Replace the FFC if it is damaged. **10** Check connector J3098 at the motor, and connector J611 on the P driver PCA. **11** Check FFC connector J104 on the DC controller PCA, and FFC connector J601 on the P driver.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
59.XY PRINTER ERROR alternates with TO CONTINUE CYCLE POWER (CLJ 9500) (continued)		**T2 clutch error** **1** Turn the printer off, and then turn the printer on again to clear the error. **2** Use the hardware diagnostic tools from the control panel to test each motor for correct functionality. **3** Remove and reseat the secondary transfer roller and the cleaning blade/ toner collection bottle. **4** Check the secondary transfer assembly for damage or jammed media. **5** Check connector J3030 on the secondary transfer assembly, intermediate connector J3026, and connector J121 on the DC controller PCA. **6** Replace the secondary transfer assembly (see the service manual for details). **7** Replace the DC controller PCA (see the service manual for details).

Table 2-14 Numerical error messages (continued)

Message	Description	Action
60.X PRINTER ERROR (CLJ 9500)	The tray number specified by X is lifting media to the top of the tray for correct feeding but an obstruction is preventing the tray from lifting correctly. X description 2: tray 2 cassette lifter 3: tray 3 cassette lifter 4: tray 4 cassette tray 8: tray 2 pickup roller lifter 9: tray 3 pickup roller lifter	**1** Check the indicated media tray for correct functionality of all of the parts. Replace the media tray if necessary. **2** Check connector J11 near the pickup motor, connector J12 near the pickup roller up/down motor, and connector J13 near the lifter motor. **3** Check intermediate connector J3001, and connector J120 on the DC controller PCA. **4** Check the connectors for the media-size detection switches J52, J54, J3076, and J3077. **5** Replace the paper pickup assembly (see the service manual for details). **6** Replace the DC controller PCA (see the service manual for details).
62 NO SYSTEM (CLJ 3500/3700)	No system was found.	**1** Turn the printer off and then on again. **2** HP 3700 only - reseat the firmware DIMM. Make sure it is in slot 1 (the bottom slot). **3** Download new firmware (HP 3700 - try downloading through the parallel port). **4** Replace the firmware DIMM.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
62 NO SYSTEM (CLJ 4500/4550, CLJ 4600, CLJ 5500)	A printer firmware problem exists. Either no firmware DIMM is installed or the DIMM has failed. If the formatter was just replaced, make sure that all of the DIMMs have been moved from the old formatter to the new one.	**1** Turn the printer off and on to reset the printer. **2** Reseat the firmware DIMM, making sure it is in the slot surrounded by a white line with the text "ROM ONLY IN THIS SLOT."
62.X PRINTER ERROR (CLJ 4500/4550)	A problem exists with the internal memory. X Description 0 internal memory 1 DIMM slot 1 2 DIMM slot 2 3 DIMM slot 3	**1** Turn the printer off and on to reset the printer. **2** Reseat the DIMM. **3** If the error persists, replace the bad DIMM. **4** If the error persists, replace the formatter board.
62.X SERVICE CYCLE POWER (CLJ 8500/8550)	A problem exists with the internal memory. X Description 0 internal memory 1 DIMM slot 1 2 DIMM slot 2 3 DIMM slot 3 4 DIMM slot 4 5 DIMM slot 5 6 DIMM slot 6 7 DIMM slot 7 8 DIMM slot 8	**1** Turn the printer off and on to reset the printer. **2** Perform DRAM DIMM test from the formatter diagnostics in the Service Menu. **3** If the problem persists, replace the bad DIMM.
62.M BAD MPTR (CLJ 4500/4550)	The firmware ran out of memory trying to build the static entity directory.	**1** Check printer settings to determine which values have been changed. **2** Clear the message by pressing GO.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
63 SERVICE CYCLE POWER (CLJ 8500/8550)	The internal RAM memory test failed.	**1** Turn the printer off and on to reset the printer. **2** Perform DRAM DIMM test from the formatter diagnostics in the Service Menu. **3** If the problem persists, replace the bad DIMM.
64 PRINTER ERROR FOR HELP PRESS ? alternates with TO CONTINUE TURN OFF THEN ON (CLJ 3500/3700) 64 PRINTER ERROR TO CONTINUE TURN OFF THEN ON (CLJ 4600, CLJ 5500) or alternates with TO CONTINUE CYCLE POWER (CLJ 9500)	Scan buffer error.	**1** Turn the printer off and then on. **2** Perform a cold reset. **3** Turn the printer off, remove all of the extra memory and EIO devices, and turn the printer on again (CLJ 9500). **4** If the message persists, replace the firmware DIMM (CLJ 3700, CLJ 4600, CLJ 5500, CLJ 9500). **5** If the message persists, replace the formatter.
65 PRINTER ERROR CYCLE POWER (CLJ 8500/8550)	Indicates a DRAM controller error.	**1** Turn the printer off and on to reset the printer. **2** Perform DRAM DIMM test from the formatter diagnostics on the Service Menu. **3** If the problem persists, replace the bad DIMM.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
66.X0.YY C-LINK COMM ERROR CHECK CABLES AND CYCLE POWER (CLJ 8500/8550)	A communication error exists between the 2,000-sheet input unit or the multi-bin mailbox and the printer. X = device number in the link YY = error code from the optional device	**1** Verify that the C-link and power cables are connected. **2** Turn the printer off and on to reset the printer. **3** If the message persists, see the appropriate service manual.
66.11.01 INPUT DEVICE FAILURE CHECK CABLES AND CYCLE POWER (CLJ 8500/8550)	A 2,000-sheet input unit lifting-motor error exists.	**1** Verify that the C-link and power cables are connected. **2** Turn the printer off and on to reset the printer. **3** Verify that no objects or paper are stored in the left side of the tray. **4** Verify that you can move the lifting plate freely by hand. **5** Verify that the paper size plates are installed correctly, and that they are not bent. **6** If the error persists, replace the paper-deck drive assembly bushing. **7** If the error persists, replace the paper-deck drive assembly. **8** If the error persists, replace the paper tray (tray 4) for the 2,000-sheet input unit.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
66.11.02 INPUT DEVICE FAILURE CHECK CABLES AND CYCLE POWER (CLJ 8500/8550)	A 2,000-sheet input unit feed-motor error exists.	**1** Verify that the C-link and power cables are connected. **2** Turn the printer off and on to reset the printer. **3** Verify that there are no objects in the left side of the tray. **4** Verify that the paper tray raised sensor (PS34) is working correctly (perform a sensor test). **5** Check for correct installation of the pick-up roller. **6** Check the pick-up assembly and the paper-deck drive assembly cabling. **7** If the error persists, replace the pick-up assembly. **8** If the error persists, replace the paper-deck drive assembly.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
66.11.03 INPUT DEVICE FAILURE CHECK CABLES AND CYCLE POWER (CLJ 8500/8550)	A 2,000-sheet input unit lifting-motor and feed-motor error exists.	**1** Verify that the C-link and power cables are connected. **2** Turn the printer off and on to reset the printer. **3** Verify that no objects are in the left side of the tray. **4** Verify that you can move the lifting plate freely by hand. **5** Verify that the paper-size plates are installed correctly, and that they are not bent. **6** If the error persists, replace the paper-deck drive assembly bushing. **7** If the error persists, replace the paper-deck drive assembly. **8** Check that the paper tray raised sensor (PS34) is working correctly (perform a sensor test). **9** Check for correct installation of the pickup roller. **10** Check the pickup assembly cabling. **11** If the error persists, replace the pickup assembly.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
66.22.08 OUTPUT DEVICE FAILURE CHECK CABLES AND CYCLE POWER (CLJ 8500/8550)	A multi-bin mailbox flipper motor error exists.	**1** Verify that the C-link and power cables are connected. **2** Turn the printer off and on to reset the printer. **3** Check for jams in the flipper assembly area. **4** If the error persists, replace the flipper assembly. **5** If the error persists, replace the multi-bin mailbox controller board PCA.
66.22.09 OUTPUT DEVICE FAILURE CHECK CABLES AND CYCLE POWER (CLJ 8500/8550)	A multi-bin mailbox external memory error exists.	**1** Verify that the C-link and power cables are connected. **2** Turn the printer off and on to reset the printer. **3** If the error persists, replace the multi-bin mailbox controller board PCA.
66.22.XX OUTPUT DEVICE FAILURE CHECK CABLES AND CYCLE POWER (CLJ 8500/8550)	A multi-bin mailbox error exists. XX = error code from the optional device	**1** Verify that the C-link and power cables are connected. **2** Turn the printer off and on to reset the printer. **3** If the error persists, replace the C-link cables. **4** If the error persists, replace the multi-bin mailbox controller board PCA.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
67.X ERROR POWER CYCLE (CLJ 8500/8550)	Indicates that an electronic controller error exists. X Description 1 controller board error 2 controller board IC malfunction 3 internal communication malfunction	**1** Turn the printer off and on to reset the printer. **2** If the error persists, replace the controller board.
68 NVRAM ERROR CHECK SETTINGS (CLJ 4500/4550)	One or more settings saved in the nonvolatile storage device are invalid. Some settings might have been reset to factory defaults.	**1** Check the printer settings to determine which values have been changed. **2** Clear the message by pressing Go.
68 NVRAM ERROR SETTINGS CHANGED (CLJ 8500/8550)	One or more settings saved in the nonvolatile storage device are invalid. Some settings might have been reset to factory defaults.	**1** Check the printer control-panel settings. One or more fields have been reset to their factory defaults during the error recovery. **2** Perform a factory defaults reset (see the service manual). **3** Perform a cold reset (see the service manual).
68 NVRAM FULL CHECK SETTINGS (CLJ 4500/4550)	A nonvolatile storage device is full. Some settings might have been reset to factory defaults.	**1** Check the printer settings to determine which values have been changed. **2** Clear the message by pressing Go.
68 NVRAM FULL SETTINGS LOST (CLJ 8500/8550)	A nonvolatile storage device is full. Some settings might have been reset to factory defaults.	Check the printer control-panel settings. One or more fields might have been reset to their factory defaults during error recovery. The next time the printer is turned off and on, NVRAM will clear and all factory defaults will be restored.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
68.X PERMANENT STORAGE ERROR FOR HELP PRESS ? alternates with 68.X PERMANENT STORAGE ERROR TO CONTINUE PRESS ✓ (CLJ 4600, CLJ 5500, CLJ 9500)	One or more printer settings saved in the nonvolatile storage device are invalid and have been reset to its factory default. Pressing the SELECT button should clear the message. Printing can continue, but you might experience unexpected behavior. X Description 0 onboard NVRAM 1 removable disk (flash or hard)	**1** Press SELECT to continue. **2** Turn the printer off and then on. **3** Check the printer settings to determine which settings have been changed. **4** Perform a cold reset. **5** Turn the printer off, remove all of the extra memory and EIO devices, and then turn the printer on again. **6** For 68.1 errors, remove files from the hard disk by using the control panel or HP Web Jetadmin. **7** Reinitialize the hard disk drive. **8** Perform an NVRAM initialization.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
68.X PERMANENT STORAGE FULL FOR HELP PRESS ? alternates with 68.X PERMANENT STORAGE FULL TO CONTINUE PRESS ✓ (CLJ 3500/3700, CLJ 4600, CLJ 5500, CLJ 9500)	A nonvolatile storage device is full. Pressing the SELECT button should clear the message. Printing can continue, but you might experience unexpected behavior. X Description 0 onboard NVRAM 1 removable disk (flash or hard)	**1** Press SELECT to continue. **2** Perform a cold reset (CLJ 9500). **3** For 68.0 errors, remove all extra memory and EIO devices, and then turn the printer off and then on again. **4** If a 68.0 error persists, perform an NVRAM initialization (CLJ 3500. CLJ 3700, CLJ 9500). **5** For 68.1 errors, use the HP Web Jetadmin software to delete files from the disk drive. **6** If a 68.1 error persists, reinitialize the hard disk.
68.X PERMANENT STORAGE WRITE FAIL TO CONTINUE PRESS ✓ (CLJ 3500/3700, CLJ 4600, CLJ 5500, CLJ 9500)	A nonvolatile storage device is failing to write. Pressing the SELECT button should clear the message. Printing can continue, but you might experience unexpected behavior. X Description 0 onboard NVRAM 1 removable disk (flash or hard)	**1** Press SELECT to continue. **2** Perform a cold reset (CLJ 9500). **3** For 68.0 errors, remove all extra memory and EIO devices, and then turn the printer off and then on again. **4** If a 68.0 error persists, perform an NVRAM initialization (CLJ 3500, CLJ 3700, CLJ 9500) **5** For 68.1 errors, use the HP Web Jetadmin software to delete files from the disk drive. **6** If a 68.1 error persists, reinitialize the hard disk.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
68.X PERMANENT STORAGE WRITE FAIL alternates with TO CONTINUE PRESS ✓ (CLJ 3500/3700)	One or more printer settings saved in the nonvolatile storage device are invalid and has been reset to its factory default. Press to clear the message. Printing can continue, but there could be unexpected behavior. **X Description:** 0 - for onboard NVRAM. 1 - for removable flash disk.	**1** 1. Press to continue. **2** Turn the printer off and then on again. **3** Check the printer settings to determine which settings have been changed.
69.X PRINTER ERROR (CLJ 9500)	A temporary printer error occurred. 00 duplex D-roller is not detected at the home position 01 duplex slide adjustment failure	**1** Turn the printer off, reseat the duplexer, and then turn the printer on again to clear the error. **2** Remove the duplexer and check for correct seating, residual media, or obstructions. **3** Check the inside of the duplexer and the duplex capacity for residual media or obstructions. **4** Check the duplexer-side registration guides for correct functionality. Replace the duplexer if necessary. **5** Check the feed rollers and drive gear trains for damage. Replace them if necessary.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
79 XXXX PRINTER ERROR (CLJ 3700)	A critical hardware error has occurred	**1** Turn the printer off and then on again. **2** Reseat the firmware DIMM. **3** Reseat the formatter PCB. **4** Replace the firmware DIMM. **5** Replace the formatter PCB.
79 SERVICE (XXXX) PRINTER ERROR (CLJ 4500/4550) 79.XXXX PRINTER ERROR TO CONTINUE TURN OFF THEN ON (CLJ 4600, CLJ 5500)	A hardware error has occurred. X Description 01XX IO ASIC register error 02XX video ASIC register error 03XX IDE ASIC register error (CLJ 4500/4550)	**1** Turn the printer off and then on. **2** If the problem persists, reseat the firmware DIMM. **3** Reseat the formatter. **4** If the problem persists, replace the firmware DIMM. **5** If the problem persists, replace the formatter, and then calibrate the printer.
79 SERVICE XXXX CYCLE POWER (CLJ 8500/8550)	A hardware error has occurred. X Description 01XX IO ASIC register error 02XX video ASIC register error 03XX IDE ASIC register error	**1** Turn the printer off. Disconnect all communication cables and EIO cards. Turn the printer on. **2** Run extended formatter diagnostics from the Service Mode Menu to troubleshoot the failure. **3** If the problem persists without the communications connected, replace the formatter board.

Table 2-14 Numerical error messages (continued)

Message	Description	Action
80 SERVICE (YYYY) EIO ERROR (CLJ 4500/4550) 8X.YYYY EIO ERROR (CLJ 3700, CLJ 4600, CLJ 5500) 8X.YYY (CLJ 8500/8550)	A critical EIO failure has occurred. X indicates the slot number of the device. YYYY (YYY in the case of the CLJ 8500/8550) indicates the error type.	**1** Turn the printer off and on to reset the printer. **2** If the error persists, reseat the EIO card. **3** If the error persists, try the EIO card in a different EIO slot (if available). **4** If the error persists, replace the EIO card.
99 ERROR (CLJ 3500/3700)	Event log only Remote firmware update (RFU) failed.	Resend the update.

Numbered error codes for the CLJ 8550mfp

These error messages appear on the copy module LCD at the time they occur. A history of errors can be reviewed through the copy module service mode (COPIER > DISPLAY > ERR). See “Service-mode functions” on page 248.

Note

Errors described as “printer” or “printer unit” will also appear as error messages on the printer LCD.

E000/E003 (CLJ 8550mfp)

E000: The fusing assembly warm-up is faulty. This error occurs when it takes longer than the reference time for the assembly to reach the standby temperature after the fusing heater has been turned on.

E003: The fusing temperature is abnormally low. This error occurs when the fusing assembly temperature drops below 120°C (248°F) after it has reached the target value.

Table 2-15 Cause and solutions for E000/E003 errors (CLJ 8550mfp)

Cause	Issue	Solution
Upper thermistor (open circuit)	Remove the fusing assembly, and measure the resistance between connectors J26F-A4 (FXTHU) and J26F-A3 (GND) on the fusing assembly side. Is it between 250 KΩ and 600 KΩ (normal temperature)?	No: Check the wiring from connector J222 on the dc controller PCB to the upper thermistor; if it is normal, replace the fuser assembly.
Lower thermistor (open circuit)	Measure the resistance between connectors J26F-A2 (FXTHL) and J26F-A1 (GND) on the fusing assembly side. Is it between 250 KΩ and 600 KΩ (normal temperature)?	No: Check the wiring from connector J222 on the dc controller PCB to the lower thermistor; if it is normal, replace the fuser assembly.
Upper fusing heater, upper thermal switch (open circuit)	With the fusing assembly removed, is there electrical continuity between connectors J27F-3 (HTUH) and J27F-4 (HTUC) on the fusing assembly side?	No: Check the upper fusing heater and thermal switch. Replace the fuser assembly if any problems are found.
Lower fusing heater, lower thermal switch (open circuit)	Is there electrical continuity between connectors J26F-3 (HTLH) and J26F-4 (HTLC) on the fusing assembly side?	No: Check the lower fusing heater and the lower thermal switch. Replace the fuser assembly if any problems are found.
Upper or lower thermistor	Is the upper or lower thermistor in even contact with the upper/lower fusing roller?	No: Mount the thermistor correctly.
Upper or lower thermistor	Is the upper or lower thermistor soiled?	Yes: Clean the area of contact with the upper or lower fusing roller.
Connector	Are connector J222 on the dc controller PCB and connector J26 of the fusing assembly connected securely?	No: Connect the connectors securely.

Table 2-15 Cause and solutions for E000/E003 errors (CLJ 8550mfp)

Power supply (printer unit)	Replace the power supply of the printer unit. Is the problem corrected?	Yes: End. No: Replace the dc controller PCB.

CAUTION

If E001 or E003 is indicated, be sure to discharge the error memory capacitor (C259) on the dc controller PCB after troubleshooting the problem, as it can contain error memory. (Short out JP201 on the dc controller PCB to discharge C259; see the Printer Unit Service Manual.)

E001 (CLJ 8550mfp)

The fusing assembly has overheated. This error occurs when the fusing temperature during standby or copying exceeds 230°C (446°F).

Table 2-16 Cause and solutions for E001 error (CLJ 8550mfp)

Cause	Issue	Solution
Upper thermistor (short circuit)	With the fusing assembly removed, measure the resistance between connectors J26F-A4 (FXTHU) and J26F-A3 (GND) on the fusing assembly side. Is it 2 KΩ or less?	Yes: Check the wiring from connector J222 on the dc controller PCB to the upper thermistor; if it is normal, replace the fuser assembly.
Lower thermistor (short circuit)	Measure the resistance between connectors J26F-A2 (FXTHL) and J26F-A1 (GND) on the fusing assembly side. Is it 2KΩ or less?	Yes: Check the wiring from connector J222 on the dc controller PCB to the lower thermistor: if it is normal, replace the fuser assembly.
Power supply (printer unit)	Replace the power supply of the printer unit. Is the problem corrected?	Yes: End. No: Replace the dc controller PCB.

CAUTION

If E001 or E003 is indicated, be sure to discharge the error memory capacitor (C259) on the dc controller PCB after troubleshooting the problem, as it can contain error memory. (Short out JP201 on the dc controller PCB to discharge C259; see the Printer Unit Service Manual.)

E004 (CLJ 8550mfp)

The upper and lower fusing heaters have an open circuit. This error occurs when no ac current is found in the fusing heater at the start of temperature control.

Table 2-17 Cause and solutions for E004 error (CLJ 8550mfp)

Cause	Issue	Solution
Upper fusing heater/ upper thermal switch (open circuit)	With the fusing assembly removed, is electrical continuity present between connectors J27F-3 (HTUH) and J27F-4 (HTUC) on the fusing assembly side?	No: Check the upper fusing heater and the upper thermal switch. Replace the fuser if problems are found.
Lower fusing heater, lower thermal switch (open circuit)	Is there electrical continuity present between connectors J27F-3 (HTLH) and J26F-4 (HTLC) on the fusing assembly side?	No: Check the lower fusing heater and the lower thermal switch. Replace the fuser assembly if problem parts are found.
Connectors	Are connector J222 on the dc controller PCB, connector J26 of the fusing assembly, and connector J101 of the printer unit power supply connected securely?	No: Connect the connectors securely.
Power supply (printer unit)	Replace the power supply of the printer unit. Is the problem corrected?	Yes: End.
		No: Replace the dc controller PCB.

E009 (CLJ 8550mfp)

Table 2-18 Cause and solutions for E009 error

Cause	Issue	Solution
Fusing assembly	Does the rated voltage of the fusing assembly match the printer's voltage?	No: Check the product number of the fuser assembly; if necessary, replace the fusing assembly or the printer unit power supply.

Table 2-18 Cause and solutions for E009 error (continued)

Connectors	Are connector J222 on the dc controller PCB and connector J26 of the fusing assembly connected securely?	No: Connect the connectors.
		Yes: Replace the dc controller PCB.

E010/E011 (CLJ 8550mfp)

E010:The main-motor start-up is faulty. This error occurs when the revolution of the main motor fails to reach a specific value.

E011:The main-motor rotation is faulty. This error occurs when the revolution of the main motor fails to reach a specific value.

Table 2-19 Cause and solutions for E010/E011 errors (CLJ 8550mfp)

Cause	Issue	Solution
Connector	Are connector J219 on the dc controller PCB and the relay connector J1 connected securely?	No: Connect the connectors securely.
Main motor	Does the voltage change from about 5 to 0 V between connector J219-4 (MON) on the dc controller PCB and connector J219-5 (GND) when the power is turned on?	Yes: Replace the main motor.
		No: Replace the dc controller PCB.

E013 (CLJ 8550mfp)

A specific number of copies have been made after the waste-toner-case full warning has been issued (DISPLAY > SENSOR > W-TONER).

Table 2-20 Cause and solutions for E013 error

Cause	Issue	Solution
Waste-toner case	Is the photosensitive drum cartridge full of waste toner?	Yes: Replace the photosensitive drum cartridge.
		No: Replace the dc controller PCB.

E019 (CLJ 8550mfp)

At the time of power-on or while the drum motor is rotating during printer operation, the light-receiving cell of the waste-toner sensor does not detect light for a specific time even when the waste-toner case is not full.

Table 2-21 Cause and solutions for E019 error (CLJ 8550mfp)

Cause	Issues	Solution
Waste-toner detection window	Is the waste-toner detection window of the photosensitive drum soiled?	Yes: Wipe the waste-toner detection window with a dry cloth.
Connectors	Are connector J21 on the dc controller PCB, connectors J631 and J633 of the waste-toner sensor, and the relay connector J71 connected securely?	No: Connect the connectors securely.
Waste-toner detecting block (light-emitting/ receiving section; printer unit)	Is the light-emitting/receiving section of the waste-toner detection block of the printer unit soiled?	Yes:Dry-wipe the light-emitting/ receiving section of the waste-toner detection block with a dry cloth.
Waste-toner detection block (printer unit)	Replace the waste-toner detection block of the printer unit. Is the problem corrected?	Yes: End. No: Replace the photosensitive drum unit. If the problem cannot be corrected, replace the dc controller PCB.

E020 (CLJ 8550mfp)

During image stabilization correction control, the LED intensity signal (LEDCNT) is weak or is not generated at all.

Table 2-22 Cause and solutions for E020 error

Cause	Issue	Solution
Density sensor (light-emitting/ receiving section)	Is the density sensor soiled?	Yes: Clean the density sensor with the special brush located near the sensor.

Table 2-22 Cause and solutions for E020 error (continued)

Connector (density detection PCB)	Are connector J1101 on the density detection PCB, relay connectors J75 and J46, and connector J206 on the dc controller PCB connected securely?	No: Connect the connectors securely.
Density detection PCB	Is the voltage 24 V between connectors J206-5 (+24 UH) on the density detection PCB and GND when the copier is turned on?	No: Replace the density detection PCB.
		Yes: Replace the dc controller PCB.

E021 (CLJ 8550mfp)

This error occurs when the developing rotary position sensor (PS3) does not detect the rotation position flag even when the developing rotary motor has rotated for a specific time. This error can also occur when the PS3 detects a faulty or incorrect rotation-flag width.

Note

On rare occasions, a broken carousel gear or broken position flag on the carousel gear can cause this error. The CLJ 8500/8550/8550mfp carousel assembly *cannot* be replaced.

Table 2-23 Cause and solutions for E021 error (CLJ 8550mfp)

Cause	Issue	Solution
Print cartridge	Step 1: Is the shutter of each print cartridge open correctly when in its correct position in the printer?	No: Replace the print cartridge whose shutter is not open.
Developing rotary motor drive assembly	Step 2: Close the print cartridge cover, and turn the power off and then on. Is the developing rotary stopper arm still holding the developing rotary assembly in place?	Yes: Go to step 6.
		No: Go to step 3.
Connector (developing rotary drive assembly)	Step 3: Are connectors J704 and J706 on the developing rotary motor PCB and connector J220 on the dc controller PCB connected securely	No: Connect the connectors securely.
5-V supply line (developing rotary position sensor)	Step 4: Are connector J43 of the developing rotary position sensor, relay connector J42, and connector J207 on the dc controller PCB connected securely?	No: Connect the connectors securely.

Table 2-23 Cause and solutions for E021 error (CLJ 8550mfp)

Developing rotary position sensor	Step 5:Replace the developing rotary position sensor. Is the problem corrected?	Yes: End.
Developing rotary stopper	Step 6: Is the operation of the developing rotary stopper arm normal? Disconnect connector J705 of the developing rotary stop solenoid (SL5); then, measure the resistance between connectors J605-10 and J605-12 on the harness side and between J705-11 and J705-12. Is it about 30Ω to 60Ω?	No: Replace the developing rotary stopper solenoid.
Developing rotary motor PCB	Step 7: Does the voltage between connectors J220-A6 (RLSROT) and J220-B5 (GND) on the dc controller PCB change from about 0 to about 3.5 V immediately after the copier is turned on?	Yes: Replace the developing rotary motor PCB.
Fuse (developing rotary motor PCB)	Step 8: Is the fuse (FU701, FU702) on the developing rotary motor PCB blown?	Yes: Replace the fuse.
		No: Replace the developing rotary motor. If the problem cannot be corrected, replace the dc controller PCB.

E032 (CLJ 8550mfp)

The counter for the copy data fails to operate. This error occurs when the illegal prevention bit of the control device goes to zero (0) when the open circuit detection mechanism is not disabled.

E040 (CLJ 8550mfp)

The holding-plat lifter (multi-feeder) is faulty. This error occurs during multi-feeder pick-up, when the holding plate position sensor (PS1302) does not detect the holding plate even when the dc controller PCB has generated the holding plate solenoid (SL4) ON signal.

Table 2-24 Cause and solutions for E040 error (CLJ 8550mfp)

Cause	Issue	Solution
Connectors	Are connector J213 on the dc controller PCB; connectors J641, J642, J643, and J647 on the printer side main relay PCB; connectors J671 and J672 on the sub-relay PCB; connector J1302 of the holding plate solenoid; and connector J102 of the power supply connected securely?	No: Connect the connectors securely.
Multi-feeder tray PCF	Does the voltage between connectors J1301-2 (+24 UH) and J1301-1 (GND) on the multi-feeder tray PCB change from 0 to 24 V?	Yes: Replace the multi-feeder tray PCB.
+24 UH	Is +24 UH present on the multi-feeder tray PCB and the holding plate solenoid?	No: See the CLJ 8550mfp service manual.
Holding plate solenoid	Disconnect connector J1302 of the holding plate solenoid from the multi-feeder tray PCB. Measure the resistance between connectors J1302-1 (MPTSLD) and J1302-2 (+24 UH) on the harness side. Is it about 160Ω?	No: Replace the holding plate solenoid.
		Yes: Replace the dc controller PCB.

E054 (CLJ 8550mfp)

Note
This error pertains to the duplexing unit, which is an accessory.

The duplexing feeding roller 1 home position sensor (PS23) does not detect the home position of the duplexing feeding roller 1 when copy paper is being fed to the duplexing unit.

Table 2-25 Cause and solutions for E054 error (CLJ 8550mfp)

Cause	Issue	Solution
Duplexing feeding roller 1 home position sensor lever	Is the duplexing feeding roller 1 home position sensor level damaged?	Yes: Replace the lever.
Duplexing feeding roller drive gear	Is the drive gear of the duplexing feeding roller worn or cracked?	Yes: Replace the worn or cracking gear.
Duplexing driver PCB	Are connectors J2003, J2004, and J2007 on the duplexing driver PCB connected securely?	No: Connect the connectors securely.
Duplexing feeding roller 1 home position sensor (PS23)	Replace the duplexing feeding roller 1 home position sensor. Is the problem corrected?	Yes: Replace the sensor.
Duplexing feeding clutch (CL5)	Disconnect connector J2003 of the duplexing feeding clutch, and measure the resistance between connectors J2003-1 and J2003-2 on the harness side. Is it about 140Ω?	No: Replace the duplexing feeding clutch.

Table 2-25 Cause and solutions for E054 error (CLJ 8550mfp)

Duplexing motor (M8)	Replace the duplexing motor. Is the problem corrected?	Yes: Replace the duplexing motor (M8).
Duplexing driver PCB		No: Replace the duplexing driver PCB.

E055 (CLJ 8550mfp)

The duplexing driver PCB has detected that the horizontal registration guide has moved in excess of the maximum distance from when the home position was detected.

Table 2-26 Cause and solutions for E055 error (CLJ 8550mfp)

Cause	Issue	Solution
Horizontal registration guide	Is the horizontal registration guide mounted correctly?	No: Mount the guide correctly.
Horizontal registration guide home position sensor (PS25) lever	Is the horizontal registration guide home position sensor lever damaged?	Yes: Replace the lever.
Horizontal registration guide drive gear	Is the horizontal registration guide drive gear worn or cracked?	Yes: Replace the worn or cracked gear.
Duplexing driver PCB	Are connectors J2006 and J2005 of the duplexing driver PCB connected securely?	No: Connect the connectors securely.
Horizontal registration guide home position sensor (PS25)	Replace the horizontal registration guide home position sensor (PS25). Is the problem corrected?	Yes: Replace the sensor.

Table 2-26 Cause and solutions for E055 error (CLJ 8550mfp)

Horizontal motor (M7)	Replace the horizontal registration motor. Is the problem corrected?	Yes: Replace the horizontal registration motor (M7).
Duplexing driver PCB		No: Replace the duplexing driver PCB.

E066(CLJ 8550mfp)

During image stabilization control, the dc controller PCB cannot detect the temperature sensor signal (TMPSNS) or the humidity sensor signal (HUMSNS).

Table 2-27 Cause and solutions for E066 error (CLJ 8550mfp)

Cause	Issue	Solution
Connector (temperature and humidity sensor)	Are connectors J801 on the temperature and humidity sensor and connector J206 on the dc controller PCB connected securely?	No: Connect the connectors securely.
temperature and humidity sensor	Replace the temperature and humidity sensor. Is the problem corrected?	Yes: End.
		No: Replace the dc controller PCB.

E100 (CLJ 8550mfp)

The laser of the scanner unit is faulty. This error occurs when the dc controller PCB detects DBERR for 2.5 seconds or longer after the scanner motor has rotated at a specific speed.

Table 2-28 Cause and solutions for E100 error

Cause	Issue	Solution
Connector (laser driver signal line)	Are connector J1001 on the laser driver PCB and connector J205 on the dc controller PCB connected securely?	No: Connect the connectors securely.
Connectors (BD line)	Are connector J2 on the BD PCB, relay connector J40, and connector J211 on the dc controller PCB connected securely?	No: Connect the connectors securely.
Laser scanner unit	Is the voltage between connectors J211-1 (+5 V) on the dc controller PCB and J211-3 (GND) 5 V immediately after the copier is turned on?	Yes: Replace the laser scanner unit.
		No: Replace the dc controller PCB.

E110 (CLJ 8550mfp)

This error occurs when the scanner motor fails to reach a specific revolution within 10 seconds after it has started to rotate. This error can also occur when the BC PCB detects an error within 2.5 seconds after the scanner motor has started to rotate.

Table 2-29 Cause and solutions for E110 errors (CLJ 8550mfp)

Cause	Issue	Solution
Connector	Are connector J901 on the laser scanner motor PC, relay connector J40, and connector J211 on the dc controller PCB connected securely?	No: Connect the connectors securely.
Laser scanner motor	Does the voltage between connectors J211-7 (SCND) on the dc controller PCB and J211-6 (GND) change from 0 to 17 V or more when the copier is turned on?	Yes: Replace the laser scanner motor.
		No: Replace the dc controller PCB.

E196/E197/E198(CLJ 8550mfp)

E196:The EEPROM (IC212) on the dc controller has an error.

E197:A machine internal communication error occurs more than once. Or, the reception interruption on the dc controller side does not occur for a specific time for internal communication.

E198:The IC on the dc controller has an error.

Table 2-30 Cause and solutions for E196/E197/E198 errors

Cause	Issue	Solution
dc controller PCB	Turn the copier off and then on. Is the problem corrected?	Yes: End. No: Replace the dc controller PCB.

E202 (CLJ 8550mfp)

The scanner home position is not detected.This error occurs when the scanner does not return to the home position when it has been started.

In response to this code, the control-panel keys will lock, and the “Wait” message will appear. This code is indicated only on the Error History screen in service mode.

Table 2-31 Cause and solutions for E202 error (CLJ 8550mfp)

Cause	Issue	Solution
	Is the scanner at home position when E202 is indicated?	No: See the CLJ 8550mfp service manual.
Original scanner home position sensor (PS101)	Does J1609A-2 on the reader controller PCB generate 5 vdc when the scanner is at PS101?	No: Check the wiring from the reader controller PCB to PS101; if normal, replace PS101.
Wiring	Is there any fault in the wiring or connectors from J1605 on the reader controller PCB to J303 and J302 on the scanner motor driver PCB?	Yes: Connect the wiring correctly.
Scanner motor driver PCB	Replace the scanner motor driver PCB. Is the problem corrected?	Yes: End.
Scanner motor (PM1)	Replace the scanner motor (PM1). Is the problem corrected?	Yes: End. No: Replace the reader controller PCB.

E203 (CLJ 8550mfp)

The scanner motor driver PCB or the scanner motor is faulty. This error occurs when the scanner home position is detected during back-scanning (not requiring return to the scanner home position sensor). It can also occur if a deviation occurs during back-scanning (returning to the scanner home position sensor).

Table 2-32 Cause and solutions for E203 error (CLJ 8550mfp)

Cause	Issue	Solution
	Does the scanner move until “E203” is indicated?	No: See the CLJ 8550mfp service manual.
Scanner motor driver PCB/ Scanner motor	Does the voltage between connectors J303-B1 (RST) on the scanner motor driver PCB and J303-B4 (GND) and between connectors J303-B2 (MOVE) and J303-B4 (GND) change from 5 to 0V?	Yes: Replace the scanner motor driver PCB. If the problem cannot be corrected, replace the scanner motor.
Reader controller PCB		No: Replace the reader controller PCB.

E211/E215 (CLJ 8550mfp)

E211:The scanning lamp (fluorescent lamp) thermistor has an open circuit. This error occurs when the temperature does not reach 10°C (50°F) after supplying the scanning lamp heater with power for two minutes (starting at 0°C [32°F] or less). It can also occur when the temperature drops to 0°C (32°F) or less during temperature control.

E215:The scanning lamp (fluorescent lamp) thermistor has a short circuit. This error occurs when the scanning lamp thermistor detects 170°C (338°F) or more when the fluorescent lamp ON signal (FLON) is off (including power-on).

Table 2-33 Cause and solutions for E211/E215 errors (CLJ 8550mfp)

Cause	Issue	Solution
	Step 1: Disconnect connector J1610 of the reader controller PCB, and measure the resistance between connectors J1610-5 (GND) and J1610-6 (FL_TH) on the harness side. Is it 100 Ω or less or 100 KΩ or more?	No: The reader controller PCB is faulty. Go to step 4. Yes: Go to step 2.
Lamp heater	Step 2: Disconnect connector J2039 of the lamp heater, and measure the resistance between connectors J2039-2 (GND) and J2039-3 (FL_TH). Is it 100 Ω or less or 100 K Ω or more?	Yes: Replace the lamp heater.
Flat cable (between J2037 and J2015) and connectors	Step 3: Are connector J1610, connectors J2037 and J2015 of the flat cable, and connector J2039 of the lamp heater connected securely?	No: Connect the connectors securely. Yes: Replace the flat cable. Or, check each of the connectors.
Reader controller PCB	Step 4: Is the voltage 38 V between connectors J1611-1 (GNDU) and J1611-2 (+38V) on the harness side of the reader controller PCB?	No: See the CLJ 8550mfp service manual. Yes: Replace the reader controller PCB.

E216, E219 (CLJ 8550mfp)

E216:The scanning lamp (fluorescent lamp) fails to turn on when the power has been turned off and then on. This error occurs when the intensity sensor does not detect light from the scanning lamp in 15 seconds.

E219:The scanning lamp (fluorescent lamp) has reached the end of its life. This error occurs when the thermistor of the scanning lamp detects a temperature of 150°C (302°F) or more while the scanning lamp is on.

Table 2-34 Cause and solutions for E216/E219 errors (CLJ 8550mfp)

Cause	Issue	Solution
Fluorescent lamp	Replace the fluorescent lamp. Is the problem corrected?	Yes: End.
Inverter PCB	Replace the inverter PCB. Is the problem corrected?	Yes: End. No: Replace the reader controller PCB.
Reader controller PCB		

E217 (CLJ 8550mfp)

The temperature does not exceed the setting when the lamp heater is powered for three minutes or more while the scanning lamp heater is going through constant temperature control.

Table 2-35 Cause and solutions for E217 error (CLJ 8550mfp)

Cause	Issue	Solution
Lamp heater, reader controller PCB	Replace the lamp heater. Is the problem corrected?	Yes: End. No: Replace the reader controller PCB.

E218 (CLJ 8550mfp)

The scanning lamp (fluorescent lamp) is absent, or the inverter PCB (copy module) is faulty. This error occurs when activation is attempted and the scanning lamp is not mounted or the lamp filament is broken.

Table 2-36 Cause and solutions for E218 error (CLJ 8550mfp)

Cause	Issue	Solution
Scanning lamp	Is the scanning lamp mounted correctly?	No: Mount the lamp correctly. (See note below.)
	Replace the scanning lamp. Is the problem corrected?	Yes: Replace the lamp.
Inverter PCB	Are connectors J1002 and J1003 on the inverter PCB, and connector J1602 on the reader controller PCB connected securely?	No: Connect the connectors securely.
		Yes: Replace the inverter PCB.

Note

If you have removed and then remounted the scanning lamp, be sure to execute intensity adjustment in service mode (FUNCTION > MISC-R > USE-LAMP).

If you have mounted a new scanning lamp, be sure to execute intensity adjustment and CCD adjustment in service mode (FUNCTION > MISC-R > LAMP-ADJ and FUNCTION > CCD > CCD-ADJ, respectively.)

E240 (CLJ 8550mfp)

One of the following has occurred:

1. The communication between the dc controller PCB and the reader controller PCB is faulty. This error occurs when the DPPRDY signal is sent for less than 0.25 seconds from the reader controller to the dc controller PCB after power-on.
2. The communication between the dc controller PCB and the formatter or between the reader controller PCB and the formatter is faulty. This error occurs when the signals between the formatter and the dc controller PCB or between the formatter and the reader controller PCB cannot be exchanged for a specific time after power-on.

Table 2-37 Cause and solutions for E240 error (CLJ 8550mfp)

Cause	Issue	Solution
Interface cable	Is the interface cable used to connect the copy module and the printer unit connected securely? Further, are the copy module power cord and the printer unit power cord connected securely?	No: Make the connections secure, and turn on the copy module.
Video interface PCB, reader controller PCB		Yes: Replace the video interface PCB or the reader controller PCB.
PS/PCL board	Turn the unit off and remove the formatter, and turn on the printer unit and copy module as one (as a copier). Is E240 indicated?	No: Replace the formatter.
dc controller PCB		Yes: Replace the dc controller PCB.

E243 (CLJ 8550mfp)

The communication between the control-panel CPU PCB and the reader controller PCB is not possible 20 seconds or more after power-on.

Table 2-38 Cause and solutions for E243 error (CLJ 8550mfp)

Cause	Issue	Solution
Connectors	Are connector J901 on the control-panel CPU PCB and connector J1608 on the reader controller PCB connected securely?	No: Connect the connectors securely.

Table 2-38 Cause and solutions for E243 error (CLJ 8550mfp)

Control-panel CPU PCB, reader controller PCB	Replace the control-panel CPU PCB. Is the problem corrected?	Yes: End.
		No: Replace the reader controller PCB.

E351 (CLJ 8550mfp)

Table 2-39 Cause and solutions for E351 error (CLJ 8550mfp)

Cause	Issue	Solution
Power supply	Are the PCBs and connectors connected securely? (If the power supply is cut abnormally, the copier can indicate “E351” when it warms up. If this occurs, turn the copier off and then on to reset.)	No: Make the connections secure, and turn the copier off and then on.
ECO PCB/ AP-IP PCB	Are the CO PCB and AP-IP PCB connected securely?	No: Connect the PCBs securely.
		Yes: Replace the parts in the order indicated: ECO PCB AP-IP PCB

E353 (CLJ 8550mfp)

E353 is indicated in response to a mismatch of the serial number of the reader controller PCB and that of the EEPROM while the reader controller PCB is being replaced. See the CLJ 8550mfp service manual.

E355 (CLJ 8550mfp)

E355 is indicated in response to a mismatch of the serial numbers of the copy module, the reader controller PCB, and the EEPROM while the reader controller PCB is being replaced (as when the wrong serial number is entered). If this code appears, enter the correct serial number of the copy module using Option > User > Serial in service mode.

E401 (CLJ 8550mfp)

The error shown on the touch-screen display is in the ADF. See the CLJ 8550mfp service manual.

This error indicates that either the pick-up motor (M1) fails to rotate or the pick-up roller sensor (S5) is faulty. In normal operation, a flag is attached to the spindle of the pick-up motor (M1), and the rotation of the motor is checked in reference to the flag blocking the pick-up roller sensor (S5). The E401 error is indicated when the sensor does not turn on and off two times or more within one second.

E402 (CLJ 8550mfp)

The error shown on the touch-screen display is in the ADF. See the CLJ 8550mfp service manual.

This error indicates that either the belt motor (M3) fails to rotate or the belt motor clock (S10) is faulty. This error occurs when the number of belt motor clock pulses within 200 ms is less than a specific value.

E403 (CLJ 8550mfp)

The error shown on the touch-screen display is in the ADF. See the CLJ 8550mfp service manual.

This error indicates that either the ADF motor (M2) fails to rotate, or the ADF motor clock sensor (S9) is faulty. This error occurs when the number of ADF motor clock pulses within 200 ms is less than a specific value.

E404 (CLJ 8550mfp)

The error shown on the touch-screen display is in the ADF. See the CLJ 8550mfp service manual.

This error indicates that either the delivery motor (M5) fails to rotate or the delivery motor clock sensor (S13) is faulty. This error occurs when the number of ADF motor clock pulses within 200 ms is less than a specific value.

E411 (CLJ 8550mfp)

The error shown on the touch-screen display is in the ADF. See the CLJ 8550mfp service manual.

This error indicates that either the document tray paper sensor (S1) or the registration sensor (S3) is faulty. This error occurs when the sensor output is 2.3 V or more in the absence of paper.

E545, E546 (CLJ 8550mfp)

The error shown on the touch-screen display is in the output device.

Note

Output devices are not supported on the LJ8550 MFP.

This error indicates that the bin flapper 1 (for E545) or bin flapper 2 (for E546) of the sorter-H1 is faulty. These errors occur when the bin flapper solenoid sensor (PI12) does not detect solenoid operation even when the solenoid (SL3 for E545 or SL4 for E546) is driven during initialization or face-down delivery. This error can also occur when the bin flapper sensor remains on even when the solenoid has stopped operation.

E677, E678, E679 (CLJ 8550mfp)

E677 indicates that an error has occurred during the initial communication between the ACC controller PCB and an accessory. The error occurs when the ACC controller PCB and the accessory are not ready for communication within four seconds (possibly due to a problem in the power supply), or when an initial communication error with each accessory has occurred.

E678 indicates that the communication between the ACC controller PCB and an accessory has been interrupted. The error occurs when the accessory is turned off in the middle of communication, or when the cable of the accessory has been disconnected in the middle of communication.

E679 indicates that an error has occurred in the protocol used for communication between the ACC controller PCB and an accessory. This error occurs when the read/write/parity check of data is faulty, and communication does not end within a specific time.

Table 2-40 Cause and solutions for E677/E678/E679 errors

Cause	Issue	Solution
Accessories power, accessories	Are the power cables of the accessories and the communication cable to the printer unit connected securely?	No: Turn the power off, make sure that the cables are secures, and then turn the power on.
		Yes: Replace the ACC controller PCB.

E710, E711 (CLJ 8550mfp)

These are IPC (initialization) errors. E710 occurs when the IPC sync register for the copy module and the copy module-related accessories fail to go to one (1) within three seconds. E711 occurs when data has been written 10 times or more to the error register within 1.5 seconds during the communication between the copy module and copy module-related accessories.

Table 2-41 Cause and solutions for E710/E711 errors (CLJ 8550mfp)

Cause	Issue	Solution
Copy module	Turn the copy module rear power switch off and then on; then, turn on the control-panel power soft switch. Is the problem corrected?	Yes: End.
Reader controller PCB, accessories (connected to the copy module)	Replace the reader controller PCB. Is the problem corrected?	Yes: End. No: See the Service Manual for the reader-unit accessory in question.

E712 (CLJ 8550mfp)

The error shown on the touch-screen display is in the ADF. See the CLJ 8550mfp service manual.

This error indicates that the IC for communication on the ADF side is faulty. This error occurs when the communication with the copy module has been interrupted for five seconds or more.

E717 (CLJ 8550mfp)

This error occurs when the copy module is started after disconnecting the copy data control without canceling the open circuit detection mechanism of the copy module. If this error has occurred, execute error clear and set COPIER > OPTION > IN-FACE > B-CLR in service mode to “0”, and then disconnect the copy data controller.

Note

The copy data controller is not available for the LJ8550 MFP.

E805 (CLJ 8550mfp)

The heat discharge fan 1 (FM, used for the fusing assembly and area near the feeding assembly) is faulty. This error occurs when the motor lock signal (FAN1LK) goes to one (1) for 1.5 seconds or more while the fan is rotating.

Table 2-42 Cause and solutions for E805 error (CLJ 8550mfp)

Cause	Issue	Solution
Connectors (heat discharge fan 1 drive assembly)	Are connectors J702 and J706 on the developing rotary motor PCB and connector J220 on the dc controller PCB connected securely?	No: Connect the connectors securely.
Connectors (24 V for heat discharge fan 1 drive)	Are connector J701 on the developing rotary motor PCB, connectors J648 and J641 on the main relay PCB, and J102 on the dc power supply connected securely?	No: Connect the connectors securely.
Heat discharge fan 1	Does the voltage change to about 24 V between connectors J702-3 (FAN1ON) on the developing rotary motor PCB and J702-1 (GND)?	Yes: Replace the heat discharge fan 1.
Developing rotary motor PCB	Does the voltage change to about 24 V between connectors J701-1 (+24 VB) and J701-2 (GND) on the developing rotary motor PCB immediately after the copier is turned on?	Yes: Replace the developing rotary motor PCB.
Main relay PCB	Does the voltage between connectors J641-1 (+24 VB) and J641-4 (GND) on the main relay PCB change to 24 V immediately after the copier is turned on?	Yes: Replace the main relay PCB.
The dc power	Is the dc power present?	No: See the CLJ 8550mfp service manual.
		Yes: Replace the dc controller PCB.

E806 (CLJ 8550mfp)

The heat discharge fan 2 (FM2, used for the area around the intermediate transfer drum) is faulty. This error occurs when the fan motor lock signal (FAN2LK) goes to one (1) for 1.5 seconds or more while the fan is rotating.

Table 2-43 Cause and solutions for E806 error (CLJ 8550mfp)

Cause	Issue	Solution
Connectors (heat discharge fan 2 drive assembly)	Are connectors J603 and J706 on the developing rotary motor PCB and connector J220 on the dc controller PCB connected?	No: Connect the connectors securely.
Connectors (24 V for heat discharge fan 2 drive)	Is connector J701 on the developing rotary motor PCB, connectors J648 and J641 on the main relay PCB, and connector J102 on the dc power supply connected securely?	No: Connect the connectors securely.
Heat discharge fan 2	Does the voltage change to about 24 V between connector J703-3 (FAN2ON) and J703-1 (GND) on the developing rotary motor PCB immediately after the copier is turned on? Does the voltage change to about 24 V for connector J702-1 (GND)?	Yes: Replace the heat discharge fan 2.
Developing rotary motor PCB	Does the voltage change to about 24 V between connectors J701-1 (+24 VB) and J701-2 (GND) on the developing rotary motor PCB immediately after the copier is turned on?	Yes: Replace the developing rotary motor PCB.
Main relay PCB	Does the voltage change to 24V between connectors J641-1 (+24 VB) and J641-4 (GND) on the main relay PCB immediately after the copier is turned on?	Yes: Replace the main relay PCB.
The dc power (printer unit)	Is the dc power present in the printer unit?	No: See the CLJ 8550mfp service manual.
		Yes: Replace the dc controller PCB.

E807 (CLJ 8550mfp)

The heat discharge fan (FM3, used for the area around the scanner) is faulty. This error occurs when the fan motor lock signal (FAN3LK) goes to one (1) for 1.5 seconds or more while the fan is rotating.

Table 2-44 Cause and solutions for E807 error (CLJ 8550mfp)

Cause	Issue	Solution
Connectors (heat discharge fan 3 drive assembly)	Are connectors J681 and J682 on the pre-exposure LED relay PCB and relay connectors J18 and J17, connectors J645 and J647 on the main relay. PCB, and connector J227 on the dc controller PCB connected securely?	No: Connect the connectors securely.
Connectors (24 V for heat discharge fan 3 drive)	Are connectors J641 on the main relay PCB and J102 on the dc power supply connected securely?	No: Connect the connectors securely.
Heat discharge fan 2	Does the voltage change to about 24 V between connectors J645-3 (FAN3ON) on the main relay PCB and J645-1(GND) immediately after the copier is turned on?	Yes: Replace the heat discharge fan 3.
Main relay PCB	Does the voltage change to 24V between connectors J641-1 (+24 VB) and J641-4 (GND) on the main relay PCB immediately after the copier is turned on?	Yes: Replace the main relay PCB.
The dc power (printer unit)	Is the dc power present in the printer unit?	No: See the CLJ 8550mfp service manual.
		Yes: Replace the dc controller PCB.

E808 (CLJ 8550mfp)

The fusing drive circuit power unit is faulty. This error occurs when the fusing heater safety circuit has detected a fault in the upper and lower fusing heaters.

Table 2-45 Cause and solutions for E808 error (CLJ 8550mfp)

Cause	Issue	Solution
Fusing assembly	Replace the fusing assembly. Is the problem corrected?	Yes: End.
Power supply (printer unit)	Replace the power supply on the printer side. Is the problem corrected? (The fusing heater drive circuit or the fusing heater safety circuit is faulty.)	Yes: End
		No: Replace the dc controller PCB.

E809 (CLJ 8550mfp)

The power supply cooling fan (FM4, used for the area around the copy module main power supply) is faulty. This error occurs when the fan error signal (FANERR) goes to zero (0) for 1.5 seconds or more while the fan is rotating.

Table 2-46 Cause and solutions for E809error (CLJ 8550mfp)

Cause	Issue	Solution
Connectors (power supply cooling fan drive assembly)	Are the relay connector J2031, connectors J7 and J8 on the copy module main power supply PCB, and connector J1602 on the reader controller PCB connected securely?	No: Connect the connectors securely.
Power supply (cooling fan)	Does the voltage change to 24 V between connectors J7-3 (+24 VB) on the copy module main power supply PCB and J7-4 (GND) immediately after the copier is turned on?	Yes: Replace the power supply cooling fan.
The dc power	Is dc power present in the copy module?	No: See the CLJ 8550mfp service manual.
		Yes: Replace the dc controller PCB.

E810 (CLJ 8550mfp)

This error occurs when the drum cartridge detecting switch does not turn on at power-on or when the cover is opened/closed.

Table 2-47 Cause and solutions for E810 error (CLJ 8550mfp)

Cause	Issue	Solution
Drum cartridge	Is the drum cartridge set in the copier correctly?	No: Set the cartridge correctly, and turn the copier off and then on.
Drum cartridge switching lever	Check the drum cartridge switching lever on the printer side. Is it displaced or cracked?	Yes: f the lever is displaced, set it to the correct position. If the lever is cracked, replace it.
Drum cartridge switching guide	Is the drum cartridge switching guide defective?	Yes: Replace the drum cartridge.
Connector (memory inside the drum cartridge)	Are connector J209 on the dc controller PCB and relay connectors J47 and J48 connected securely?	No: Connect the connectors securely.
Memory (inside the drum cartridge)	Replace the drum cartridge. Is the problem corrected?	Yes: End.
		No: Replace the dc controller PCB.

E812 (CLJ 8550mfp)

This error occurs when the intermediate transfer drum (ITD) home position is not detected within a specific time (about 10 seconds).

Table 2-48 Cause and solutions for E812 error

Cause	Issue	Solution
Intermediate transfer drum (ITD), Density sensor	Is the intermediate transfer drum (ITD) set in the printer correctly?	No: Set the drum correctly, and turn the power off and then on.
		Yes: See “E020 (CLJ 8550mfp)” on page 223.

E813 (CLJ 8550mfp)

This error occurs when both the upper fusing roller temperature detection signal (FXTHU) and the lower fusing roller temperature detection signal (FXTHL) indicate -10°C (14°F) or less.

Table 2-49 Cause and solutions for E813 error (CLJ 8550mfp)

Cause	Checks	Action
Fusing assembly	Is the fusing assembly set in the printer correctly?	No: Set the fusing assembly correctly, and turn the power off and then on.
Connector (fusing assembly)	Is connector J26 of the fusing assembly connected securely?	No: Connect the connector securely.
Connector (dc controller PCB)	Is connector J222 on the dc controller PCB connected securely?	No: Connect the connector.
		Yes: Replace the dc controller PCB.

E814 (CLJ 8550mfp)

A specific number of copies have been counted after the photosensitive drum end of life warning has been issued.

Table 2-50 Cause and solutions for E814 error (CLJ 8550mfp)

Cause	Checks	Action
Drum cartridge	Replace the drum cartridge. Is the problem corrected?	Yes: End.
		No: Replace the dc controller PCB.

E903 (CLJ 8550mfp)

The error shown on the touch-screen display is in the side HCI. See the CLJ 8550mfp service manual.

This error indicates one of three problems:

1. An error has been detected in the paper deck lifter motor.
2. The lifter upward movement takes longer than the specified time.
3. The paper level change time is in excess of a specific value while the lifter is moving up.

E999 (CLJ 8550mfp)

A timing problem has occurred with the copy module. Power cycle the unit to alleviate the problem.

Service-mode functions

In service mode, you can modify page counts and certain registration values for the printer.

Note

The CLJ 2500 does not have a control-panel display. Set or modify service-mode information by using the following PJL commands from the MS-DOS Editor window. Follow the instruction in table 2-52 on page 252 to modify or set service information.

To gain access to the service mode

Table 2-51 Gaining access to the service mode

Product	Instructions
CLJ 2500	The CLJ 2500 does not have a control panel. For service mode functions, open the embedded Web server by using one of these methods: • From the HP Color LaserJet 2500 Series Toolbox, click the picture of the printer on the **Device** tab (Windows 98, NT 4.0, Me, 2000, and XP only). • For network printers only, type the IP address for the printer. To find the IP address, print a configuration page at the printer control panel by pressing GO and CANCEL JOB simultaneously. The embedded Web server has three tabs that contain settings and information about the printer. See the service manual for more information about each tab. **Note** For more information about the embedded web server, see the *HP Embedded Web Server for HP LaserJet Printers and MFPs* manual.

Table 2-51 Gaining access to the service mode

Product	Instructions
CLJ 3500/3700	The Service menu is PIN protected for added security. Only authorized service people have access to the Service menu. When you select **SERVICE** from the list of menus, you are prompted to enter your 8-digit PIN number. The PIN for the HP Color LaserJet 3500 series printer is 10350003 and for the HP Color LaserJet 3700 series printer is 10370003. **1** Press UP ARROW or DOWN ARROW until the first digit of the PIN is displayed. **2** Press SELECT to save the digit. The display will replace the digit with an asterisk. **3** Repeat steps 1 and 2 until all eight digits are entered. **4** Press BACK ARROW at any time to move to the previous digit.

Table 2-51 Gaining access to the service mode

Product	Instructions
CLJ 4500 CLJ 4550	**Note** In the CLJ 4500, when the configuration page is printed while the printer is in service mode, all event log messages are printed as well. The CLJ 4550 event log can be printed from the Information menu. If both the formatter and DC controller are replaced at the same time, use service mode to execute the color-plane registration sequence to ensure optimum print quality. **1** Hold down the CANCEL JOB key and SELECT key while turning the printer on until the display is blank and the three LEDs are on. **2** Press the right side of the MENU key, and then press the SELECT key. Service mode appears on the front panel briefly followed by two rows of asterisks. The printer completes its normal start-up cycle, and then SERVICE MODE appears on the front panel. **Entering the Service Mode Menu** **1** From a READY state, press MENU until SERVICE MENU appears. **2** Press ITEM – (the left side of the key) and VALUE – simultaneously. **3** Press the MENU key to access the Service menu.
CLJ 4600 CLJ 5500	The Service menu is PIN protected for added security. When you select SERVICE from the list of menus, you are prompted to enter your 8-digit PIN number. The PIN for this printer is 04550002. **1** Press UP ARROW or DOWN ARROW until the first digit of the PIN is displayed. **2** Press SELECT to save the digit. The display replaces the digit with an asterisk. **3** Repeat steps 1 and 2 until all eight digits are entered. **4** Press RIGHT or LEFT ARROW at any time to move to the previous digit.

Table 2-51 Gaining access to the service mode

Product	Instructions
CLJ 8500 CLJ 8550	**1** From a READY state, press MENU until SERVICE MENU appears. **2** Press ITEM – (the left side of the key) and VALUE – simultaneously.
CLJ 9500	**1** From a READY or OFFLINE state, press ▲ or ▼ to cycle through the control-panel menus until SERVICE MENU appears on the display. **2** Press ✓.

Service menu items

Table 2-52 Service menu items

Product	Service menu items
CLJ 2500	The CLJ 2500 does not have a control-panel display. Use PJL commands to set or modify service mode information. . The “X” and “#” entries in the PJL command list below are placeholders. Replace them with the correct serial and formatter information and page counts. Page count information is found on the printer configuration page. ESC%-12345X @PJL SET SERVICEMODE=HPBOISEID @PJL SET SERIALNUMBER=XXXXXXXX @PJL SET FORMATTERNUMBER=XXXX @PJL SET PAGES=### @PJL SET COLORPAGES=### @PJL SET SERVICEMODE=EXIT ESC%-12345X **Use the MS-DOS command prompt to open the MS-DOS editor window.** **1** Go to the Windows **Start** menu, click **Programs**, and then click **Accessories**. **2** Select **Command Prompt** from the menu list. **3** The command prompt window appears. Type in “EDIT” (no quotation marks) and then press the ENTER key. **4** The MS-DOS editor widow appears. The CLJ 2500 does not have a control panel. For service mode functions, see the *HP Embedded Web Server for HP LaserJet Printers and MFPs* manual.

Table 2-52 Service menu items (continued)

Product	Service menu items
CLJ 2500 continued	**Create the escape sequence (ESC) in the MS-DOS editor window.** **1** Press and hold down the CTRL key. Press the P key, and then release both keys. **2** Press the ESC key. The editor will insert a left pointing arrow symbol. **3** Type the PJL command line next to the arrow. **Send the PJL command to the printer.** **1** Open the **File** menu and select **Save As** to save and name the PJL command file. **2** Open the **File** menu and select **Exit** to return to the MS-DOS prompt window. **3** Type in “C:\Copy_filename.txt LPT1;” (no quotation marks) and press the ENTER key. **4** The PJL file containing the PJL command is sent to the printer.
CLJ 3500/3700	Clear event log Total mono pages Total color pages Refurbish page count Transfer kit count Fuser kit count Serial number Service ID Cold reset paper

Table 2-52 Service menu items (continued)

Product	Service menu items
CLJ 4500 CLJ 4550	The Service menu provides the following options . Press the ITEM key to scroll through the Service menu. ● Serial number ● Transfer maintenance count ● Fuser maintenance count ● Color page count ● Total page count ● Registration page (see page 266) ● Diagnostics mode (see page 270) ● Paper-path test (see page 274) ● Developer test (see page 274) ● Drum test (see page 275) ● Door-sensor test (see page 276) ● Formatter diagnostics (see page 272) ● Engine test (see page 269)

Table 2-52 Service menu items (continued)

Product	Service menu items
CLJ 4600 CLJ 5500	• CLEAR EVENT LOG Allows you to clear the printer's internal event log • TOTAL PAGE COUNT Allows you to reset the page count after replacing the formatter. The page count should reflect the number of pages printed on the print engine rather than the formatter. • TRANSFER KIT COUNT Allows you to reset the page count of the current transfer unit if the value is lost. This item automatically resets to zero when the transfer unit is replaced and the user selects the choice to reset the transfer count. • FUSER KIT COUNT Allows you to reset the page count of the current fuser if the value is lost. This item automatically resets to zero when the fuser is replaced and the user selects the choice to reset the fuser count. • SERIAL NUMBER Allows you to update the serial number if you replace the formatter. • SERVICE ID If you replace the formatter, this item allows you to set the date to the date the printer was first used, rather than the date the new formatter was installed. • COLD RESET PAPER If the customer uses default paper size of A4 (used in Europe), this item allows you to reset the default if you replace the formatter.

Table 2-52 Service menu items (continued)

Product	Service menu items
CLJ 8500 CLJ 8550	• NVRAM SETTING menu is provided to replace values that might be lost when a formatter board or control board is replaced in the field ◆ Serial number ◆ Formatter number ◆ Total page count ◆ Color page count ◆ Duplex count ◆ Transfer life left ◆ Fuser life left ◆ Engine setting 1(registration values are located on a sticker inside of the front of the printer) ◆ Engine setting 2 (same as above) ◆ CR paper size (cold reset) ◆ Clear event log • FORMATTER DIAGNOSTICS menu is provided for manufacturing and field service personnel to perform specific diagnostic tests on the formatter board and its related components. ◆ Execute tests ◆ Fault setting-determines how the printer will perform when an error is encountered. ◆ ROM CRC-memory test ◆ DRAMM DIM-memory test ◆ IDE ASIC-formatter IDE ASIC test ◆ Disk/hard-disk test ◆ VX ASIC-formatter VX ASIC test ◆ Fault log-event error log ◆ Power-off to exit (turn printer power off to exit the formatter diagnostics) • Paper path • Developer motor • Drum motor • Sensor monitor • Exit service mode

Table 2-52 Service menu items (continued)

Product	Service menu items
CLJ 9500	CLEAR EVENT LOG Clear the event log after maintenance or repairs are accomplished. TOTAL MONO PAGES Set the total monochrome page count if the formatter is replaced. TOTAL COLOR PAGES Set the total color page count if the formatter is replaced. REFURBISH PAGE COUNT Set to retain the page count of a refurbished printer. This allows the regular page count to be set to zero after the printer is refurbished. The refurbished page count number is zero for new printers. CLEANING KIT COUNT Set the total cleaning kit page count if the formatter is replaced. TRANSFER KIT COUNT Set the total transfer kit page count if the formatter is replaced. FUSER KIT COUNT Set the total fuser kit page count if the formatter is replaced. SERIAL NUMBER Reset the printer serial number if the formatter is replaced. SERVICE ID Establishes the first power-on date for warranty determination. COLD RESET PAPER Sets the printer default media size to A4 or letter. STAPLER/STACKER Perform a staple-position calibration (if the stapler/stacker is attached).

NVRAM Initialization

NVRAM initialization should always be completed immediately after replacing the firmware or the formatter board. This procedure aligns the firmware with the formatter. Not performing NVRAM initialization could result in lower print quality. Before initializing NVRAM, be sure to gather and write down the following information, if possible.

- Total page count and color page count
- Percentage of life remaining for both the transfer kit and the fuser kit
- Serial number

Note

This information is available on the configuration page or through the service mode.

After replacing the firmware or the formatter board, the following settings are changed or lost. If you do not want to accept the new values, use the service mode to enter the previous settings that you wrote down before initializing.

- Total page count and total color page count
- Transfer kit percentage of life remaining
- Fuser kit percentage of life remaining
- Printer serial number

To perform NVRAM initialization

Table 2-53 Performing NVRAM initialization

Product	Instructions
CLJ 2500	**1** Turn the printer off. **2** Press and hold the Go button. **3** Turn the printer on and continue to hold the Go button. **4** After the Go, Ready, and Attention LEDs turn on, continue holding for at least 20 seconds. During this process, the Attention, Ready, and Go LEDs will each turn off. **5** Release the Go button. **6** The device LEDs begin cycling from front to back. The NVRAM-init process runs until the printer is in the Ready state.

Table 2-53 Performing NVRAM initialization

Product	Instructions
CLJ 3500/3700	**1** Turn the printer on and watch the control panel display. **2** When the display begins showing the memory count, press and hold DOWN ARROW until all three lights on the control panel are lit. **3** Press UP ARROW. **4** Press MENU. The display should show SKIP DISK LOAD. **5** Press DOWN ARROW until NVRAM INIT is highlighted. **6** Press SELECT. The printer will initialize NVRAM and then continue its power-on sequence.
CLJ 4500 CLJ 4550	**1** Turn on the printer while holding down both the CANCEL JOB and SELECT keys until all the LED lights are on, then release the keys. **2** Press CANCEL JOB. **3** Press SELECT.
CLJ 4600 CLJ 5500	**1** Turn the printer on and watch the control-panel display. **2** When the display begins showing the memory count, press and hold DOWN ARROW until all three lights on the control panel are lit. **3** Press DOWN ARROW. **4** Press PAUSE/RESUME. The display should show SKIP DISK LOAD. **5** Press DOWN ARROW until NVRAM INIT is highlighted. **6** Press DOWN ARROW. The printer will initialize NVRAM and then continue its power-on sequence.
CLJ 8500 CLJ 8550	Not applicable.

Table 2-53 Performing NVRAM initialization

Product	Instructions
CLJ 9500	**1** Turn the printer on and watch the control-panel display. **2** When the display begins showing the memory count, press and hold ▼ until all three lights on the control panel are lit. **3** Press ▲. **4** Press PAUSE/RESUME. The display should show `SKIP DISK LOAD`. **5** Press ▲ until `NVRAM INIT` is highlighted. **6** Press ✓. The printer will initialize NVRAM and then continue its power-on sequence.

Hard-disk initialization

Table 2-54 Hard-disk initialization

Product	Instructions
CLJ 2500 series	Not applicable
CLJ 3500/3700	Not applicable
CLJ 4500 CLJ 4550	Not applicable
CLJ 4600 CLJ 5500	**1** Turn the printer on. **2** As the printer performs its power-on sequence, press and hold the PAUSE/RESUME button until all three lights on the control panel are lit. **3** Press ENTER. The display should show INITIALIZE DISK. **4** Press SELECT. The printer will initialize the hard disk and continue its power-on sequence.
CLJ 8500 CLJ 8550	**1** From the host computer, delete data from the printer hard disk using the printer drivers or a disk-management program. **2** To clear all data from the printer hard disk, reformat the printer hard disk from the printer control panel. To reformat the printer hard disk: a. Press MENU until CONFIGURATION MENU appears on the display. b. Press ITEM until INITIALIZE DISK appears on the display. c. Press SELECT to reformat the printer hard disk.

Table 2-54 Hard-disk initialization

Product	Instructions
CLJ 9500	**1** Turn the printer off. **2** Turn the printer on. **3** Press and hold PAUSE/RESUME on the control panel during the memory count. **4** Hold PAUSE/RESUME down until all three error lights illuminate steadily. **5** Press ⮌ until INITIALIZE DISKS appears on the display panel. **6** Press ✓ . **7** The printer begins initializing the disk (this might take a moment). The control panel shows the HP event logo and eventually READY APPEARS.

Calibration bypass (CLJ 3500/3700, CLJ 4600, and CLJ 5500 only)

During certain diagnostic procedures, bypass the automatic calibration that is performed whenever the printer is turned on.

To bypass calibration

1. Turn the printer on and watch the control-panel display.
2. When the display begins showing the memory count, press and hold DOWN ARROW until all three lights on the control panel are lit.
3. Press UP ARROW.
4. Press MENU (CLJ 3500/3700) or PAUSE/RESUME (CLJ 4600 and 5500). The display should show SKIP DISK LOAD.
5. Press UP ARROW until SKIP CALIBRATION is highlighted.
6. Press SELECT. The printer will skip calibration and then continue its power-on sequence.

Calibrate Now (CLJ 3500/3700, CLJ 4600, and CLJ 5500 only)

Use the following procedure to calibrate the printer whenever you replace the DC controller, the ETB, the drum drive motors, the drum drive gears, or a laser/scanner.

1. Press SELECT to enter the MENUS.
2. Press DOWN ARROW to highlight CONFIGURE DEVICE.
3. Press SELECT to select CONFIGURE DEVICE.
4. Press DOWN ARROW to highlight PRINT QUALITY.
5. Press SELECT to select PRINT QUALITY.
6. Press DOWN ARROW to highlight CALIBRATE NOW.
7. Press SELECT to select CALIBRATE NOW.
8. Wait for the printer to calibrate.

Cold Reset

Cold reset clears all data from the print buffer and returns the printing menu and the configuration menu to the factory default settings.

To perform a cold reset

Product	Instructions
CLJ 2500	**1** Turn the printer off. **2** Press and hold down the GO button. **3** Turn the printer on and continue to hold the GO button **4** After the Go, Attention, and Ready LEDs turn on, continue holding the GO button for approximately five seconds, but not longer than fifteen seconds. During this process, the Attention LED will turn off. **5** Release the GO button. **Note** If either the Go or Ready LED turned off or no LEDs turned off before the GO button was released, then repeat steps 1 through 5. **6** The printer LEDs begin cycling from front to back. The cold-reset process runs until the printer is in the Ready state.
CLJ 3500/3700	**1** Turn the printer on. **2** As the printer performs its power-on sequence, press and hold SELECT until all three lights on the control panel are lit. **3** When SELECT LANGUAGE appears on the display, press UP ARROW until COLD RESET appears on the display. **4** Press SELECT. The printer will perform a cold reset and then continue its power-on sequence.
CLJ 4500 CLJ 4550	Select RESTORE FACTORY DEFAULTS from the Reset menu.
CLJ 4600 CLJ 5500	**1** Turn the printer on. **2** As the printer performs its power-on sequence, press and hold SELECT until all three lights on the control panel are lit. **3** When SELECT LANGUAGE appears on the display, press UP ARROW until COLD RESET appears on the display. **4** Press SELECT. The printer performs a cold reset and then continues its power-on sequence.

Product	Instructions
CLJ 8500 CLJ 8550	**1** Print a configuration page to record the previous printer settings. **2** Turn the printer off. **3** Hold down Go while turning the printer on. Release Go after COLD RESET appears on the printer control-panel display. COLD RESET (in English) appears on the display for one second to verify that the key sequence has been recognized, followed by the power-on self-test message. Once the power-on self-test is finished, the message RESTORING FACTORY SETTINGS displays in English.
CLJ 9500	**1** Turn off the printer, and then turn the printer on again. **2** Press and hold ✓ during the memory count. **3** Continue to hold ✓ until all three control-panel lights illuminate steadily, and then release ✓ . **4** When SELECT LANGUAGE appears on the control panel, press ▼ . **5** COLD RESET appears. **6** Press ✓ while COLD RESET appears on the control panel. The cold reset is complete.

Registration page

Product	Instructions
CLJ 2500	Not applicable
CLJ 3500 CLJ 3700	Not applicable
CLJ 4500 CLJ 4550	**Note** You must set the registration values if both the formatter and DC controller are replaced at the same time or if the formatter was previously installed in another printer. If the DC controller is replaced by itself, these values are copied from the formatter to the DC controller. If a new formatter is replaced, or if an NVRAM initialization is performed (see page 258), these values are loaded onto the formatter from the DC controller. **Printing a registration page** **1** Scroll through the Service menu until PRINT REGISTRATION PAGE appears. **2** Select the paper tray to pull paper from (only when setting left side margins will the tray actually matter). **3** Press SELECT to print the registration page.
CLJ 4600 CLJ 5500	**1** Press SELECT to enter the MENUS. **2** Press DOWN ARROW to highlight DIAGNOSTICS. **3** Press SELECT to select DIAGNOSTICS. **4** Press DOWN ARROW to highlight PQ TROUBLESHOOTING. **5** Press SELECT to print the pages.
CLJ 8500	Not applicable
CLJ 8550	Not applicable
CLJ 9500	Not applicable

Setting registration numbers (CLJ 4500 and CLJ 4550 only)

On each of the color bars in the process section are bold numbers that indicate the current number set on the control panel. These bold numbers are always in the middle of the bars. To set the correct value for each of the colors, look at the lines within the bar and find the grouping that has the color line directly on top of the black line (it will have more white space). Print at least five registration pages to see if the new settings are correct.

Note

Using a magnifying glass to look at the lines will help in selecting the best number.

Setting the registration number (CLJ 4500/4550 only):

1. Use the ITEM key to select the appropriate color (cyan, magenta, or yellow) in order to view or change its registration number.
2. Press the +VALUE- key to change the registration number to the one identified.
3. Press the SELECT key to enter the value.

Setting margin numbers (CLJ 4500/4550 only):

The top margin number is not tray-dependent like the left-side margin. You can print the registration page from whichever tray has paper. Using a ruler, measure from the top edge of the paper to the series of lines. Find the line that is 13 mm (0.5 inch) away from the edge of the paper.

Setting the top margin registration value:

1. Press the ITEM key to scroll through the Service menu until top margin is displayed.
2. Press the +MENU- key until the number to be entered is displayed.
3. Press the SELECT key to enter the number.

Print another registration page and the number just entered will align with the arrow and be bold.

The left-side margin setting is tray dependent. Tray 1 has its own number while Trays 2 and 3 are combined. The procedure is the same as the top margin with one exception. The page must be printed from the tray that will be adjusted.

Printing from Tray 1:

1 Press the ITEM key until PRINT REGISTRATION PAGE TRAY = 1 (default) is displayed.

2 Press the SELECT key.

3 Measure from the left side of the paper to the lines and find the line that is 13 mm (0.5 inch) from the edge of the paper.

If the number for the line is different then the current number:

1 Press the ITEM key until TRAY 1 LEFT MARGIN = * is displayed.

2 Press the +VALUE- key to change the number to the number required.

3 Press the SELECT key.

Printing from Tray 2 and 3:

1 Press the ITEM key until PRINT REGISTRATION PAGE TRAY = 2 or 3 is displayed.

2 Press the SELECT key.

3 Measure from the left side of the paper to the lines and find the line that is 13 mm (0.5 inch) from the edge of the paper.

If the number for the line is different then the current number:

1 Press the ITEM key until TRAY 2 AND 3 LEFT MARGIN = * is displayed.

2 Press the +VALUE- key to change the number to the number required.

3 Press the SELECT key.

Engine test

The test patterns either contain vertical lines or horizontal lines, depending on the product. When an image defect appears, a test print can be made to identify the problem. The test print can be made by pressing the test print switch located on the right side of the printer (see figure below).

The engine test does the following:

- Verifies that the print engine is functioning correctly (the formatter PCB is completely bypassed during an engine test).
- Isolates printer problems.
- Checks and adjusts registration.
- Can be activated with the formatter PCB removed.

Table 2-55 Engine test button

Product	Location of engine test button
CLJ 2500	The engine test switch is inside tray 1, on the left side, just below the front cover. To print an engine test, turn the product off and then on again, open tray 1, and then press the engine-test switch. **Note** The formatter must be connected to the ECU to perform an engine test. Otherwise, the printer does not print the engine test.
CLJ 3500/3700	Use a small pointed object to depress the test page switch located on the left side of the printer
CLJ 4500 CLJ 4550	The engine test button is accessed through a small hole on the side of the printer. **Note** The engine test does not print from tray 1. For the printer to perform an engine test, tray 2 or tray 3 must be installed and loaded with paper, and the print cartridge must be installed in the printer.
CLJ 4600 CLJ 5500	The engine test button is accessed through a small hole on the side of the printer.
CLJ 8500/8550	The CLJ 8500/8550 do not support this function.
CLJ 9500	The engine test button is located on the DC controller PCA. You can reach it through a hole at the right rear of the printer by using a small, non-metallic screwdriver or long, thin object.

Diagnostics mode CLJ 4500/4550

This section provides an overview of the diagnostic tools incorporated into the HP Color LaserJet 4500 series and 4550 series printers.

CAUTION

Use caution when performing printer diagnostics to avoid risk of injury. Only trained service personnel should access the diagnostic mode with the skins removed.

There are two diagnostic sections built into the firmware, one for the formatter and the other for the engine. Each section contains different tests that allow the service technician to verify printer functionality. While in diagnostic mode there are no error messages associated with these tests. Therefore, determination of the problem will rely on the technicians skill. To exit diagnostic mode, turn the printer off.

Note

In the 4550 series, you can abort a test run by pressing the CANCEL JOB key and holding it down until the display shows the menu again. In some cases, it will take several seconds. To cancel the NVRAM test while it is running, press the CANCEL JOB key and hold it down until the display show the menu again. NVRAM is put back in its original form, and an error is logged in the Fault log.

When the Attention LED is on, then there has been an error in the test. Press the MENU key to get to the Fault log menu, the ITEM key to see the different log messages, and the -VALUE+ key to scroll the message back and forth.

Gaining access to the diagnostics mode

- To access the diagnostics mode, hold down the left side of the ITEM key and turn on the printer.

Formatter diagnostics are designed to be used by qualified service personnel. This set of tests are designed to thoroughly test the functionality of the formatter. If all the tests pass, the formatter is working correctly and it is likely that the problem resides elsewhere. Listed below are descriptions of the formatter tests available.

CAUTION

NVRAM can be lost if the printer is turned off during testing.

Note

In the 4550 series, you can abort a test run by pressing the CANCEL JOB key and holding it down until the display shows the menu again. In some cases, it will take several seconds. To cancel the NVRAM test while it is running, press the CANCEL JOB key and hold it down until the display show the menu again. NVRAM is put back in its original form, and an error is logged in the Fault log.

When the Attention LED is on, then there has been an error in the test. Press the MENU key to get to the Fault log menu, the ITEM key to see the different log messages, and the -VALUE+ key to scroll the message back and forth.

Table 2-56 Formatter diagnostics CLJ 4500/4550

Test	Description
REPEAT	If set to yes, the tests will run continuously until interrupted. In the **4550 series only**, CANCEL JOB will abort the test.
ON FAULT	The following will occur for each setting: BREAK – The test will stop when a failure occurs. PAUSE – Stops the test for a short period of time then resume with the remaining tests. CONT – Continues to execute the tests even when a failure occurs.
ROM CRC	**4500 series only.** Tests the firmware ROM for correct functionality.
DRAM	Tests the on-board RAM and the DIMMs.
SRAM 1	Tests the SRAM inside the ASIC.
SRAM 2	Tests the SRAM physically mounted on the formatter.
NVRAM	Do not interrupt the NVRAM test. Doing so will cause the printer to lose all NVRAM values. Tests the formatter NVRAM. This test takes 18 minutes to run and should only be used when NVRAM values are being lost. In almost all cases, this test should never be run. In the **4550 series only**, CANCEL JOB will abort the test. Do not turn off the printer or corruption of the NVRAM could result; if the NVRAM test must be aborted, use the CANCEL JOB key.
EXECUTE TESTS	Runs the selected tests.

Engine diagnostics CLJ 4500/4550

A good understanding of how the printer operates is required to use the engine diagnostics successfully.

To have a better view of the areas being exercised, remove the left-side cover and the ITB drawer. Defeat the two ITB drawer switches located on the left side of the drawer cavity.

Listed below are the diagnostics available and a brief description of what the diagnostic will do.

Table 2-57 Engine diagnostics CLJ 4500/4550

Menu item	Description
Continuous	Selected test will run once. Selected test will run in a continuous loop. In the **4550 series only**, CANCEL JOB will abort the test. Turns on the motors that control the paper path section of the printer. In the **4550 series only**, CANCEL JOB will abort the test.
Paper Path Test	Rotates the carousel and the developers. In the **4550 series only**, CANCEL JOB will abort the test.
Developer Test	Turns on the drum drive motor that drives the drum and ITB. In the **4550 series only**, CANCEL JOB will abort the test.
Drum Test	Displays the state for each of the paper path sensors and switches. In the **4550 series only**, this test will continue running until the CANCEL JOB key is pressed.
Path Sensors	Displays the state for each of the door and drawer switches. In the **4550 series only**, this test will continue running until the CANCEL JOB key is pressed.
Door Sensors	Selected test will run once. Selected test will run in a continuous loop. In the **4550 series only**, CANCEL JOB will abort the test.

Developer test (CLJ 4500/4550)

The developer test rotates the carousel stopping at each print cartridge and rotating the developer sleeve. For the best view of the carousel and the print cartridge sleeves, remove the drum cartridge. The drum drawer must be closed before the test can run.

1. Press the ITEM key until `ENGINE DIAGS DEVELOPER TEST` is displayed.
2. Press the SELECT key to run the test. The front panel displays `ENGINE DIAGS E2:DEVELOPER` while the test is running. Watch the carousel and make sure that the print cartridge developer sleeve rotates. The sequence is black followed by a pause, then magenta, cyan, and finally yellow.

The test takes approximately 35 seconds. While the developer test is running you will see the drum turn if it is installed, as well as the drive gear for the ITB.

Drum test (CLJ 4500/4550)

The drum test exercises the drum drive mechanism. In addition, the fuser motor is turned on to allow the lift cams for the ITB to be rotated into the ITB up position.

1 Press the ITEM key until `ENGINE DIAGS DRUM TEST` displays.

2 Press the SELECT key to run the test. The front panel displays `ENGINE DIAGS E3:DRUM` while the test is running.

Watch to see if the ITB lift cams turn and if both the drum drive gear and the ITB drive gear is rotating.

Path sensors (CLJ 4500/4550)

The path sensors test allows the paper path sensors and switches to be tested for correct operation. The table below shows the correlation between the identifier on the front panel and the sensor or switch it represents.

Table 2-58 Paper path sensors and switches CLJ 4500/4550

Name	Description
PS8	Tray 2 paper detect sensor
PS3	Tray 1 last piece of media pulled sensor
PS4	Tray 1 paper detect sensor
SW801	Tray 2 paper size switch 2
SW802	Tray 2 paper size switch 1
SW803	Tray 2 paper size switch 0
PS3001	Optional Tray 3 paper detect sensor
SW3001	Optional Tray 3 paper size switch 2
SW3002	Optional Tray 3 paper size switch 1
SW3003	Optional Tray 3 paper size switch 0
PS10	Carousel position sensor
PS11	N/A
N/A	500-sheet feeder: 1=installed, 0=uninstalled
PS9	Top output tray full sensor

1 Press the ITEM key until ENGINE DIAGS PATH SENSORS is displayed on the front panel.

2 Press the SELECT key to activate the test. The front panel will display A through N with a binary value below it.

When running this test, make sure the ITB drawer is installed with Tray 2 and Tray 3 (if installed) removed. In this state, the default value on the front panel should be: 0X111111110010, where the x can be either 0 or 1. If there is any other value, then there is a possible problem. Identify the sensor or switch in the table above and test to see if the value changes. Cassette paper-size settings for each tray are described in the table below.

Table 2-59 Paper-size settings CLJ 4500/4550

Paper Size	Tray 2 switches (DEF)	Tray 3 switches (HIJ)
A4	000	000
B5	001	001
Custom (A5)	010	011*
Custom (B5 ISO)	011	011*
Letter	100	100
Executive	101	101
Legal	110	110
No tray installed	111	111

Path sensors (CLJ 2500/3500/3700/4600/5500/8500/8550/9500)

See chapter 5 for locations of path sensors.

Door sensor test (CLJ 4500/4550)

The door sensor test allows service personnel to open and close doors on the printer while watching the sensor status on the front panel. Switches 4 and 5 are in series with each other, which causes the value to toggle under identifier A.

Once the door sensor test is initiated, the front panel displays the status for each sensor listed in the table below. As a door is opened and closed, the state of the sensor changes the indicator values on the front panel.

Table 2-60 Sensor status CLJ 4500/4550

Name	Description
SW4 and SW5	Front and rear door switches.
SW1	ITB drawer switch.
SW2	Print cartridge door
SW3	Drum drawer switch.
Drum detect	Detect if a drum cartridge is installed.
Fuser	Detects if fuser is installed. Changes the state of the sensor if not detected or removed when rear door is opened and closed.

1 Press the ITEM key until `ENGINE DIAGS DOOR SENSORS` is displayed on the front panel.

2 Press the SELECT key to activate the test.

The front panel displays A through F with a binary value below it. All the doors and drawers should be closed. In this state, the display will show all 0's. Open the doors and drawers one at a time to verify correct functionality. If operating correctly, the 0 will change to a 1. If a 1 is displayed with all doors and drawers closed, there is a bad switch or connection.

Door sensor test (CLJ 8500/8550 2,000-sheet input unit)

1. Set the DIP switches on the 2,000-sheet input unit's controller PCA for the sensor test. (See page 430 for an explanation of the settings.)
2. For each paper sensor:
   a. Open the paper tray and the VTU on the 2,000-sheet input
   a. unit.
   b. Remove the metal spring that holds the sensor unit in place (secured by 1 screw) (see figure 153 callout 2 and figure 154 callout 2).
   c. Pull out the sensor unit.
4. Use the switch that is located on the unit's power supply to switch to diagnostic mode.
5. Manually activate the sensor.
   - When you activate the sensor, the bottom service LED on the controller PCA comes on. When you release the sensor, the LED goes off.
   - If the LED does not come on, there is a problem with the sensor. Replace the corresponding field replaceable unit.
6. To stop the test, turn the power supply switch back to operational mode and set the DIP switches on the controller PCA to the off position.

Troubleshooting printer accessories CLJ 8500/8550

Status LED descriptions CLJ 8500/8550

The status light on the front of the CLJ 8500/8550 provides status information.

Table 2-61 Status LED on the 2,000-sheet input unit CLJ 8500/8550

State	Description	Resolution
Solid green	The unit is on and ready.	None required.
Solid amber	The unit is experiencing a hardware malfunction.	Isolate the problem using one of the other procedures described in this section.
Flashing amber	The unit has a jam or a page needs to be removed from the 2,000-sheet input unit, even if the page is not jammed.	Clear the jam or remove the page.
	The VTU might be open.	Close the door.
Off	The printer might be in Power Save mode.	Press Go.
	The unit is not receiving power.	Check the power supply and the power cables.

Service LED descriptions

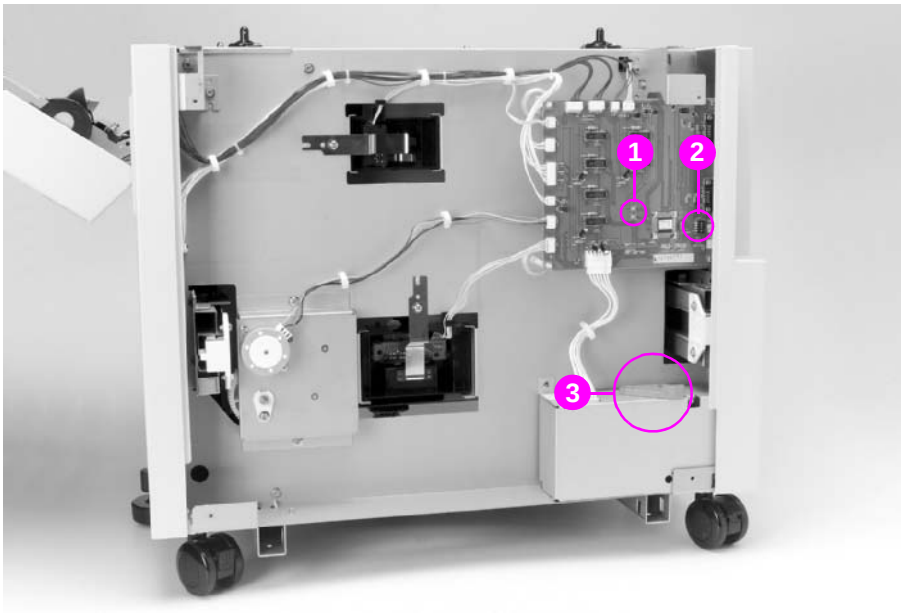


Figure 2-1 Rear view of 2,000-sheet input unit (CLJ 8500/8550)

1 Service LEDs

2 DIP switches

3 Power supply

Note

Be sure to turn the power supply off and set all DIP switches to the off position when you finish the test, or the unit will not work.

The DIP switch is ON if it is to the right. The DIP switch is OFF if it is to the left.

Note

To go from one test to another or to change the DIP switch settings, turn the power supply on the 2,000-sheet input unit to operational mode. Reset the DIP switches on the controller PCA, and then switch the power supply back to diagnostic mode to enable the new diagnostic test.

Service LED interpretation CLJ 8500/8550

If the CLJ 8500/8550 2,000-sheet input unit is working correctly, it will pick up paper from tray 4 and expel it; the bottom service LED will flash regularly every 0.5 seconds.

Table 2-62 Patterns of LED flashing (CLJ 8500/8550)

Long (1 sec)	Short (0.3 sec)	Description	Recommended action
3	1	Lifter malfunction	Verify that the tray lifts freely by lifting it by hand. Verify that the paper size plates are installed correctly (in the same corresponding slots) and are not bent. If neither of these is the problem, replace tray 4.
2	1	Registration sensor delay jam	The media does not reach the sensor. Open the VTU door and remove the media. Replace the paper feed (VTU) assembly or the paper pick-up assembly.
2	2	Registration sensor stationary jam/initial jam	Open the VTU door and remove the media. Check the sensors and replace the corresponding field replaceable unit.
2	3	Jam sensor delay jam	The media did not reach the sensor. Open the VTU door and remove the media. Replace the paper feed (VTU) assembly or the paper pick-up assembly.
2	4	Jam sensor stationary jam/initial jam	Open the VTU door and remove the media.
1	1	VTU door is open	Close the door.
1	2	Tray 4 is open Wrong paper size loaded	Close the tray. Load the correct size of paper or check sensors.
1	3	No paper in tray 4	Load paper or check sensors.

Troubleshooting tray 4 (CLJ 9500)

Tray 4 troubleshooting tools

Tray 4 can run standalone diagnostics to test the device motors, functionality, and sensors. You need one power cord, one #2 Phillips screwdriver, and a small, flat-blade screwdriver for the DIP switches.

Tray 4 diagnostics label

The tray 4 diagnostics label is located on the inside of the tray 4 back cover.

Table 2-63 DIP switch settings

DIP switch	Normal	Motor test	Standalone running test	Sensor test
1	Off	On	On	Off
2	Off	On	Off	Off
3	Off	Off	Off	On
4	Off	On	On	On

Note

Make sure that you turn the power supply off and set all of the DIP switches to the OFF position (normal settings) when you finish the diagnostics, or the unit will *not* work correctly. Then, replace the back cover.

Tray 4 motor test

This test verifies that the three motors on tray 4 are functioning correctly.

1. Identify the back cover (opposite from the tray door). Remove the four screws in the back cover, and then remove the back cover.
2. Open tray 4.
3. Set the DIP switches on the controller PCA to motor test mode.
4. Pull out on the blue handle to turn the power supply switch to diagnostic mode.
   - if the motors are working correctly, you hear them as they rotate continuously
   - if the motors do not rotate, replace the corresponding FRU (either the paper pickup assembly or the paper-deck drive assembly)
5. To stop the test, set the power switch to the operational mode (push in), and

reset the DIP switches on the controller PCA to the OFF position.

Tray 4 standalone running test

This test verifies that tray 4 is functioning correctly. For this test, use the LED that is located on the controller PCA on tray 4.

Note

If tray 4 is mounted underneath the printer, jams might occur because the printer will *not* pick up the media. To prevent excessive jams during this test, feed only six to eight pages.

1. Make sure that media is loaded in tray 4.
2. Set the DIP switches on the tray 4 controller PCA for standalone running mode.
3. Pull the blue power supply switch outward to set the power supply switch to the diagnostic mode. The motors start and media should lift from the tray.
   - if the unit does not work correctly, the lower service LED on the controller PCA flashes in a pattern that indicates the problem (see Table 2-64 for an interpretation of the LED patterns)
4. To stop the test, set the power supply switch to the operational mode, and set the DIP switches on the controller PCA to the OFF position (see Table 2-63). Open tray 4 and remove any media from the paper path.

Tray 4 sensor test

This test manually activates the sensors on tray 4 to test if they are working correctly.

1. Set the DIP switches on the controller PCA for sensor test mode.
2. For each paper sensor:
   - open tray 4
   - remove the metal spring that holds the sensor unit in place (secured by 1 screw)
   - pull out the sensor unit
3. To set the power supply switch to the diagnostic mode, pull the blue power supply switch outward.
4. To manually activate each sensor, press it in with your finger.
   - When you activate the sensor, the bottom service LED on the controller PCA illuminates. When you release the sensor, the LED goes dark.
   - If the LED does not illuminate, a problem exists with the sensor. Replace the corresponding FRU.
5. To stop the test, set the power supply switch to the operational mode, and set

the DIP switches on the controller PCA to the OFF position (see Table 2-63).

Tray 4 light pattern interpretation

If tray 4 is working correctly, it picks up media from the tray and feeds it to the printer, and the bottom service light flashes regularly every 0.5 second.

Table 2-64 Tray 4 light pattern interpretation

Long (1 sec)	Short (0.03 sec)	Error number/ meaning	Recommended action
3	1	66.11.01 Lifter malfunction	Lift the tray by hand to make sure that it lifts freely. Make sure that the paper size plates are installed correctly (in the same corresponding slots) and are not bent. If neither of these is the problem, replace tray 4.
2	1	13.11.11 Registration sensor delay jam	The media does not reach the sensor. Open the door, and remove the media. Replace the paper pickup assembly.
2	2	13.11.3B Registration sensor station jam/initial jam	Open the door, and remove the media. Check the sensors, and replace the corresponding FRU.
2	3	13.11.31 Jam sensor delay jam	The media did not reach the sensor. Open the door, and remove the media. Replace the paper pickup assembly.
2	4	13.11.21 13.11.2B Jam sensor stationary jam/initial jam	Open the door and remove the media.
1	1	Paper path door is open	Close the door.
1	2	Media tray is open Wrong-size media is loaded	Close the tray. Load the correct size of media, or check the sensors.
1	3	No media in the tray	Load media, or check the sensors.

Note

If the LED does not come on, replace the paper-deck PCA or the universal power-supply assembly.

Tray 4 does not print media

- make sure that power is supplied to tray 4
- print a configuration page and make sure that tray 4 is listed in the paper-handling options section
- run a paper-path test from tray 4 (if the test is successful, the paper-size detection switches might have failed or an incorrect size might be specified in the software program)
- make sure that the custom-size switch setting is correct

3 Jams

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General paper-path checklist

- Verify that media is correctly loaded in the input trays and that all length and width guides are set correctly.
- Clean the printer. Debris in the paper path, such as toner and paper dust inhibits free movement of media through the printer and blocks the sensors.
- Change the printer input and output selections to determine if the problem is associated with a particular area of the printer.
- Check the condition of the pickup rollers and feed rollers. Worn separation pads on the multipurpose tray can cause media to multifeed. Bent separation tabs can cause media misfeeds and multifeeds. Replace the tray, if necessary.
- Defective paper-tray switches can cause jams by indicating the wrong paper size to the formatter.
- Scraps of media that remain in the paper path can cause intermittent jams. Always check that the paper path is clear when you clean the printer and when you clear jams. Also, remove the fuser and carefully check it for jammed media.

Paper-path troubleshooting

Paper-path test

CLJ 2500 paper-path test

If media is not being picked up or is not moving through the paper path, you might want to observe all of the paper-motion activities. Override the door interlock (SW301) to observe the followin functions:

- motor rotation
- solenoid action
- pickup-roller motion
- drive-roller, transfer-roller, fuser-roller and gear, and delivery-roller motion

Push a piece of heavy paper into the slot in the top cover (callout 1) to engage SW301 (this overrides the door interlock).

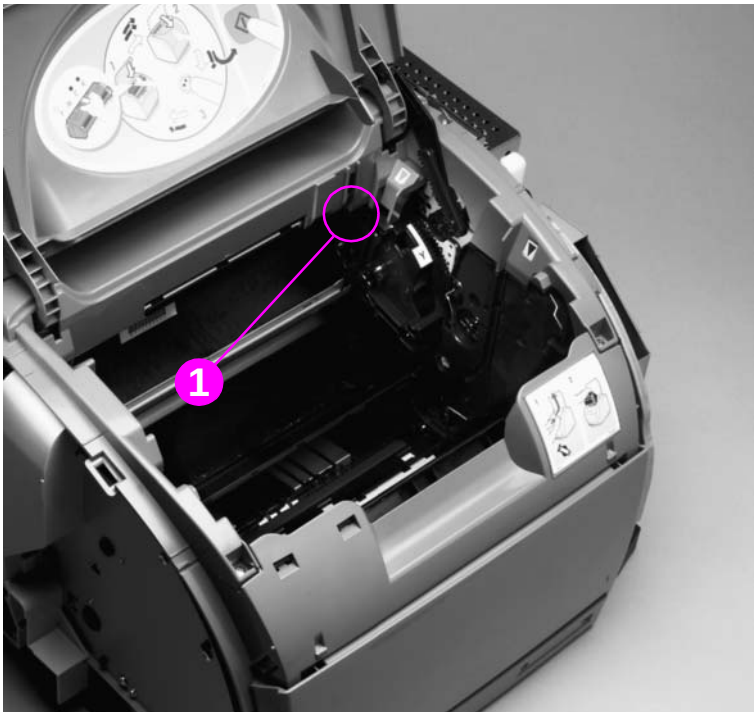

Figure 3-1 CLJ 2500 door interlock

CLJ 4500/4550 paper-path test

1 Press the ITEM key until you see ENGINE DIAGS PAPER PATH TEST on the control-panel display.

2 Press the SELECT key to activate the test. While the test is running you see ENGINE DIAGS E1:PAPERPATH on the control-panel display.

The test takes approximately 15 seconds to run.

The following components function during the paper-path test: the fusing motor (M1), paper-path motor (M2), and associated gears and assemblies. The paper pick roller for tray 2 can be activated by manually activating the paper pick-solenoid (SL2). This test will not pick paper and move it through the paper path. To test this function, simply run a Configuration page. For multiple pages, select Continuous Configuration page on the control-panel display.

The paper-path test allows the service technician to verify the operation of components within the paper path. When the test is initiated, both the M1 and M2 are activated. You will see the ITB lift cams rotate once and the ITB drive gear turn briefly. The remaining portion of the test simply allows both the M1and M2 to run, and to move the gears and rollers that are associated with them.

Note

If an error occurs during the paper-path test, the message PATH_1PAPER PATH TEST FAILED appears.

CLJ 4600/5500 paper-path test

This diagnostic test generates one or more test pages that you can use to isolate the cause of jams.

To isolate a problem, you can specify which input tray to use, specify whether to use the duplex path, and specify the number of copies to print. Multiple copies can be printed to help isolate intermittent problems. The following options become available after you enter the diagnostic mode:

- **Print test page**. Run the paper path test from the default settings: Tray 2, no duplex, and one copy. To specify other settings, scroll down the menu and select the setting, then scroll back up and select PRINT TEST PAGE to start the test.
- **Source**. Select Tray 1, Tray 2, or Tray 3 (if the optional 500-sheet paper feeder is installed).
- **Duplex**. Enable or disable 2-sided printing.
- **Copies**. Set the numbers of copies to be printed; the choices are 1,10, 50, 100, and 500.

CLJ 8500/8550 paper-path test

The paper-path test simulates a page moving through the paper path from input trays 1, 2, and 3 to the output bins. Removing some engine parts (such as the transfer drum) prevents paper from feeding completely. It is possible to select the input and output trays for the test by indicating in the PAPER PATH menu, the input tray and output bins to use (by selecting ON or OFF). Multiple input trays can be selected, but only a single output can be selected. A page is fed from each input tray to the selected output. If a jam occurs during the test, the test should continue with the next input tray in the list.

CAUTION

Because jam detection is OFF in this mode, an unattended test might result in damage to the printer.

The pickup rollers, feed rollers, registration roller, transfer-belt press clutch (CL4), cleaning-roller press cam and solenoid (SL1), fuser, transfer belt, and output feed roller can be tested during the paper-path test. For safety reasons, the fuser, high-voltage supplies, and scanner are all turned off during testing.

1. From the **Service Mode** menu, press MENU until PAPER PATH appears.
2. Press ITEM until REPETITIONS appears.
3. Press -VALUE+ to specify the number of repetitions (1 to 10) and then press SELECT.
4. Press ITEM until the input source that you want to test appears (you can select more than one input source for the test).
5. Press -VALUE+ until ON or OFF appears on the display, and then press SELECT.
6. Press ITEM until OUTPUT= appears on the display.
7. Press -VALUE+ until TOP OUTPUT BIN or LEFT OUTPUT BIN appears on the display.
8. Press SELECT to select the output destination.
9. Press ITEM until EXECUTE TEST appears on the display, and then press SELECT to perform the paper-path test.

Note

To stop the paper path test, press CANCEL JOB.

The transfer drum can be removed by opening the right upper door open and overriding the right cover interlock. However, media might not feed past the transfer area unless 11 x 17-inch or A3-sized media is used.

CLJ 9500 paper-path test (and automatic sensors test)

The paper-path test can be used to make sure that various paper paths are working correctly or to troubleshoot problems with tray configuration. It also allows you to print a page or pages with complete control over source, duplex, and destination.

If the sensors option is ON, you can see the paper-path sensor status when the page is printing. The media jam sensor status is reported if SENSORS is selected. If it is not selected, the normal error message appears and all errors are entered into the event log.

1 Press ✓ to open the menus.

2 Use ▲ or ▼ to scroll to DIAGNOSTICS, and then press ✓.

3 Use ▲ or ▼ to scroll to PAPER PATH TEST, and then press ✓.

4 Use ▲ or ▼ to select the input tray that you want to test, the output bin, the duplexer (if available), and the number of copies. Press ✓ after you set the value for each location.

Note

If SENSORS is selected, the printer enters a special diagnostic mode. If you are in the diagnostic mode, the sensor status appears and the SENSORS message will *not* appear as an option.

5 If the SENSORS option is selected, the letters A through K appear on the control panel. The values are explained in the following list.

- A = Tray 2 feed A
- B = Tray 2 feed B
- C = Tray 3 feed A
- D = Tray 3 feed B
- E = Preregistration
- F = Pre-T2
- G = Pre-fuser
- H = Fuser outlet
- I = Duplex reverse
- J = Fuser feed
- K = Face-down output.

6 After selecting the last option, use ▲ or ▼ to scroll to PRINT TEST PAGE, and then press ✓.

Perform the following steps to exit the test if SENSORS is selected:

1 Press the CANCEL JOB button.

2 Use ▲ or ▼ to scroll to EXIT DIAGNOSTICS, and then press ✓.

3 The printer will reboot.

Jams

CLJ 2500 jams

Occasionally, paper or other print media can become jammed during a print job. Causes include the following:

- Input trays are loaded improperly or are overfilled.
- Optional tray 2 or optional tray 3 is removed during a print job.
- The top cover is opened during a print job.
- Too many sheets have accumulated in an output area or blocked an output area.
- The media being used does not meet HP specifications. See the user guide for information about print-media specifications.
- The environment in which the paper was stored is too humid or too dry. See the user guide for information about print-media storage specifications.
- Non-HP supplies are installed in the printer.

Jams can occur in these locations:

- Inside the printer
- In input areas
- In output areas

Find and remove the jam by using the instructions on the following pages. If the location of the jam is not obvious, look first inside the printer.

Loose toner might remain in the printer after a jam. This problem should resolve itself after a few sheets have been printed.

CLJ 2500; to clear jams from inside the printer

CAUTION

Jams in this area might result in loose toner on the page. If you get toner on your clothes or hands, wash them in cold water. (Hot water will set the toner into the fabric.)

1. Open the top cover.
2. Remove the imaging drum by pushing it away from you and lifting it out of the printer.

Note

You *cannot* reach jams by removing the print cartridges.

3. Complete one of these steps:
   - If the leading edge or the trailing edge of the paper is visible, carefully pull the paper out of the printer.
   - If the paper is too difficult to remove, remove the jam as described in “CLJ 2500; to clear jams from output areas” on page 295.
4. After the jam has been removed, replace the imaging drum and close the top cover.
5. Press Go if the Go light is blinking. If the Attention light is still blinking, then another jam is present. See “CLJ 2500; to clear jams from input areas” on page 294 and “CLJ 2500; to clear jams from output areas” on page 295.

CLJ 2500; to clear jams from input areas

1. Open optional tray 2 or optional tray 3 to expose the jam.
2. Complete one of these steps:
   - If the jam has already partially entered the printer, see “CLJ 2500; to clear jams from inside the printer” on page 294.
   - If the jam is only in the input tray, remove the jam by pulling it out by the visible edge. Realign all of the paper in the tray and proceed to step 4.
3. If you could not remove the jam from inside the printer or by pulling it out of the tray, grasp the jam from the outside of the printer and carefully pull it free.
4. Push the paper down to lock the metal lift plate into place (tray 2 only) and slide the tray back into the printer.

5 Open the top cover, close it again, and then press Go if the Go light is blinking. If the Attention light is still blinking, then another jam is present. See “CLJ 2500; to clear jams from inside the printer” on page 294 and “CLJ 2500; to clear jams from output areas” on page 295.

CLJ 2500; to clear jams from output areas

CAUTION
Jams in these areas might result in loose toner on the page. If you get toner on your clothes or hands, wash them in cold water. (Hot water will set the toner into the fabric.)

1 Complete one of these steps:

- If the paper is not almost completely visible from the top output bin, proceed to step 2.
- If the paper is almost completely visible, pull it carefully out of the printer and proceed to the step 9.

2 Open the rear output door.

3 If the leading edge of the paper is visible from the rear opening, carefully pull the paper out.

4 If the jam is too far into the printer to remove, turn off the printer and disconnect the power cable.

CAUTION
Always turn off the printer and disconnect the power cable before you remove the fuser.

5 Rotate the locks on the fuser to the unlocked position.

6 Grasp the fuser handles and pull to remove the fuser from the printer.

WARNING!
The parts on the internal surface of the fuser are very hot. To avoid burning yourself, do not touch those parts.

7 Using both hands, slowly and steadily remove any paper from inside the printer. Then, carefully reinsert the fuser and secure the locks.

8 Reconnect the power cable and turn on the printer.

9 Open the top cover, close it again, and then press Go if the Go light is flashing. If the Attention light is still blinking, then there is another jam. See “CLJ 2500; to clear jams from inside the printer” on page 294 and “CLJ 2500; to clear jams from input areas” on page 294.

CLJ 3500/3700 jam locations

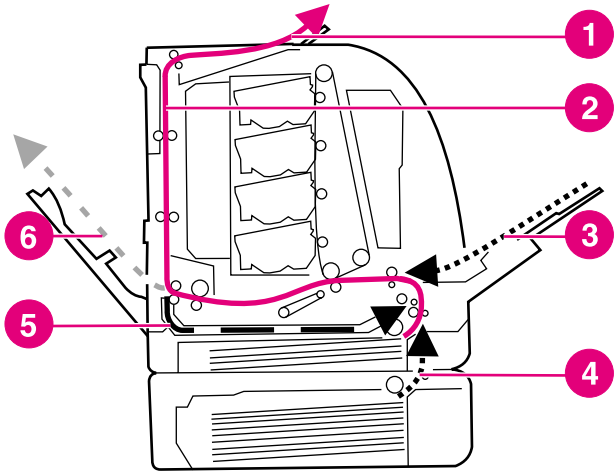

Figure 3-2 Jam locations (CLJ 3500/3700) (shown without optional Tray 3)

Table 3-1 Jam locations and error messages (CLJ CLJ 3500/3700)

1	output bin
2	paper path
3	Tray 1 input
4	trays
5	duplex path
6	path to lower rear door (rear output bin)

CLJ 3500/3700; jam in Tray 1

1 Remove the paper from the tray.

2 Grasp the jammed paper by both corners and pull.

3 Reinsert the paper in Tray 1.

4 Confirm that the paper guides are against the paper without bending it and that the paper does not extend above the fill tabs.

5 Press SELECT to resume printing.

CLJ 3500/3700; jam in Tray 2 or Tray 3

1. If the optional Tray 3 is installed, pull out Tray 3 and place it on a flat surface. If the jammed media is visible, remove it from Tray 3.
2. If the media is not visible, check inside the printer in the top of the tray opening. Remove any media.
3. Pull out Tray 2 and place it on a flat surface.
4. If the media is visible, remove it.
5. If the media is not visible, check inside the printer in the top of the tray opening. Remove any media.
6. Replace Tray 2 and optional Tray 3.

Note
Use Tray 1 and the lower rear door (rear output bin) when printing on heavier media.

7. Press SELECT to resume printing.

CLJ 3500/3700; jam inside the upper rear door

Note
The message `13.XX.YY JAMINSIDEUPPER REAR DOOR` can appear on the printer control panel if the upper rear door is open. Make sure the upper rear door is closed when printing.

1. Remove any media that is visible in the top output bin.
2. Open the upper rear door.
3. Remove any media
4. Close the upper rear door.
5. If no media is visible, open the lower rear door (rear output bin).
6. Press down on the green levers and remove the media. Return the green levers to the up position after removing the page.
7. Close the lower rear door (rear output bin).
8. If printing does not resume, press SELECT.

CLJ 3500/3700; jam inside the fuser area

1 Open the lower rear door (rear output bin).

Note

Make sure the green pressure levers are not in the down position. If the green pressure levers are down, they can cause a jam message to appear on the printer control panel.

2 If the media is visible, press down on the green levers and remove the media. Return the green levers to the up position after removing the media, and close the lower rear door (rear output bin).

3 If the paper is not visible, turn the printer off.

WARNING!

The fuser will be hot. Wait 10 minutes before proceeding.

4 Slide out the lower rear door (rear output bin) tray extender.

5 Remove the lower rear door (rear output bin) by lifting and pulling the right side of the door while pressing the tab with the ridges on the left side of the door.

6 Place your thumbs on the blue ridges (near the warning label), and using your fingers, pull up on the blue latches.

7 Pull the fuser out of the printer.

8 On the fuser, squeeze and lift the black tabs to open the shutter door.

CAUTION

Do not open the shutter door while the fuser is in the printer.

9 Remove any jammed media.

10 Hold the fuser with your thumbs on the blue ridges and your fingers on the blue latches. Push both sides of the fuser into the printer.

11 Press the black ridges on the front of the fuser until the fuser clicks into place.

12 To reattach the lower rear door (rear output bin), hold the door at a 45º angle, and fit the peg into the round hole on the right side.

13 Press the ridges on the tab on the left side of the door, and fit the peg into the round hole.

14 Close the lower rear door (rear output bin). Turn the printer on.

CLJ 3500/3700; jam inside the lower rear door (rear output bin)

1 Open the front door.

CAUTION
Do not place anything on the transfer unit. Do not touch the top of the transfer unit or the contacts on the left side of the transfer unit.

2 Remove the magenta and yellow print cartridges.

3 If necessary, turn the green roller wheel toward the rear of the printer to advance the media. Remove any media.

Note
If the media tears, make sure that all media fragments are removed from the paper path before resuming printing.

4 Replace the magenta and yellow print cartridges.

5 Close the front door.

CLJ 3500/3700; jam in the duplexer

Note
This message appears for HP Color LaserJet 3700dn and 3700dtn printer models only. The the message `13.XX.YY JAM REMOVE TRAY 2` appears on the printer control panel.

1 Remove Tray 2 and place it on a flat surface.

2 Remove any paper in the top of the tray opening.

3 On the left side of the tray opening, pull the green lever straight forward until the metal paper-access plate (duplex pan) drops.

4 Remove any jammed paper.

5 Push the metal paper-access plate (duplex pan) up until it locks in place.

6 Replace Tray 2.

7 Press SELECT to resume printing.

CLJ 4500/4550 jam locations

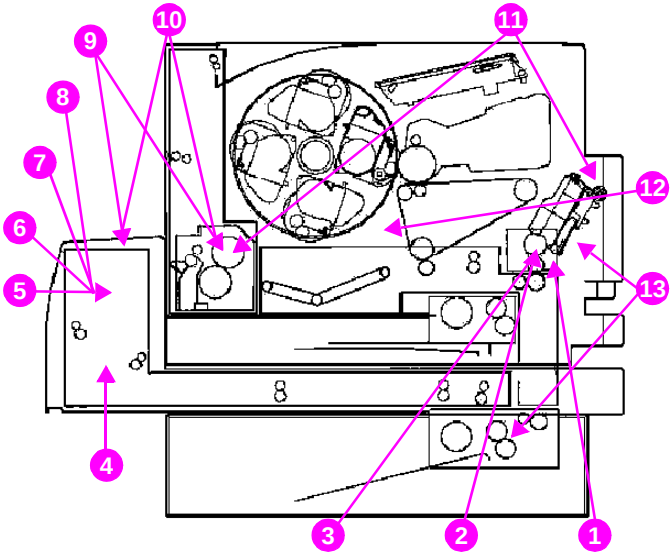

Figure 3-3 Jam locations (CLJ 4500/4550) (shown with the optional 500-sheet paper feeder and duplex unit installed)

See the following tables for the associated error messages.

Table 3-2 Jam locations and error messages (CLJ 4500)

1	13.11 Media in the paper path is too long. Check the Tray 1 area. Check the entire paper path.	8	13.3 Jam in duplex reverse unit. Inspect the rear of the duplex unit and the duplex tray.
2	13.10 Media in the paper path is too short. Check the Tray 1 area. Check the entire paper path.	9	13.2 Jam in fusing area. Check the fuser assembly, output assembly, and duplex unit.
3	13.9 Irregular-media jam in the paper path. Check the Tray 1 area. Check the entire paper path.	10	13.1 Jam in fusing area. Check the fuser assembly, output assembly, and duplex unit.
4	13.8 Door-open jam. Check the rear door, duplex cover, and rear output door. 13.7 Jam in paper-feed area. Check the entire paper path.	11	13.1 Jam. OPEN MIDDLE FRONT DRAWER alternates with CHECK IN REAR OF DRAWER. Check the middle front drawer. Check and pull out the fuser.

Table 3-2 Jam locations and error messages (CLJ 4500)

5	13.6 Jam in duplex paper-feed area. Inspect the rear of the duplex unit and the duplex tray.	12	13.1 Jam. Check in rear of drawer. Check the rear of the middle front drawer. Reseat the transfer roller.
6	13.5 Jam in duplex paper-feed area. Inspect the rear of the duplex unit and the duplex tray.	13	13.0 Jam in input feed area. Check the input trays and duplex unit.
7	13.4 Jam in duplex unit. Inspect the rear of the duplex unit and the duplex tray.	14	13.12 Media did not clear the input sensor in time.

Table 3-3 Jam locations and associated error messages (CLJ 4550)

1	13.25 Media in the paper path is too long. Check the Tray 1 area. Check the entire paper path.	8	13.10 Jam in duplex reverse unit. Inspect the rear of the duplex unit and the duplex tray.
2	13.24 Media in the paper path is too short. Check the Tray 1 area. Check the entire paper path.	9	13.6 Jam in fusing area. Check the fuser assembly, output assembly, and duplex unit.
3	13.23 Irregular-media jam in the paper path. Check the Tray 1 area. Check the entire paper path.	10	13.5 Jam in fusing area. Check the fuser assembly, output assembly, and duplex unit.
4	13.21 Door-open jam. Check the rear door, duplex cover, and rear output door. 13.20 Jam in paper- feed area. Check the entire paper path.	11	13.5 Jam. OPEN MIDDLE FRONT DRAWER alternates with CHECK IN REAR OF DRAWER. Check the middle front drawer. Check and pull out the fuser.
5	13.13 Jam in duplex paper-feed area. Inspect the rear of the duplex unit and the duplex tray.	12	13.5 Jam. Check in rear of drawer. Check the rear of the middle front drawer. Reseat the transfer roller.
6	13.12 Jam in duplex paper-feed area. Inspect the rear of the duplex unit and the duplex tray.	13	13.1 Jam in input feed area. Check the input trays and duplex unit.
7	13.11 Jam in duplex unit. Inspect the rear of the duplex unit and the duplex tray.	14	13.2 Media did not clear the input sensor in time.

CLJ 4600/5500 jam locations

Jams occur in the areas shown in Figure 3-4 . Jam messages correlate with these areas. For instructions to clear jams, see the following pages.

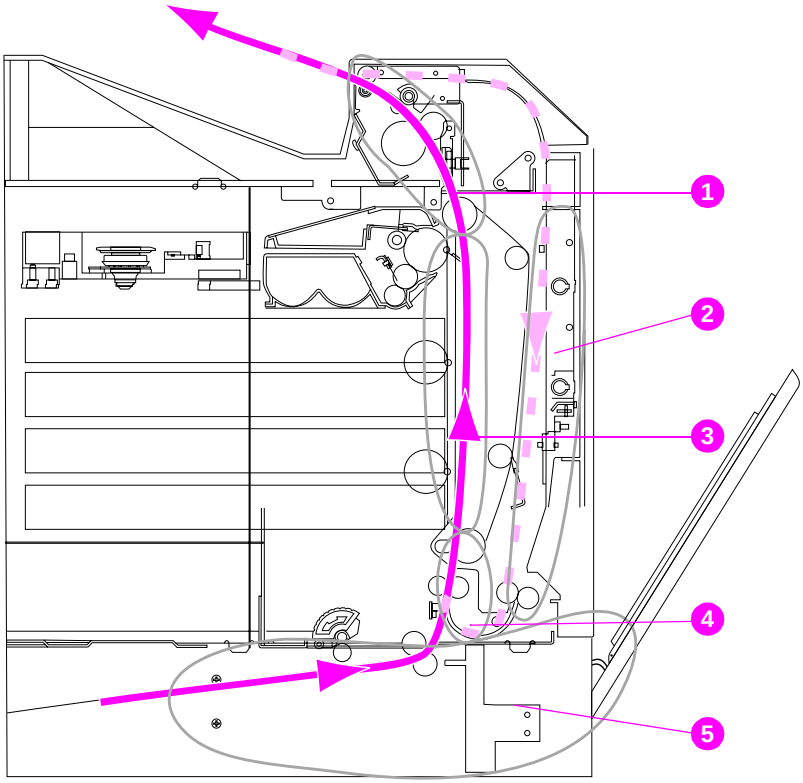

Figure 3-4 Jam locations (CLJ 4600/5500)

Table 3-4 Jam locations and error messages (CLJ 4500)

1	Top-cover area	4	Paper input path
2	Duplex Path	5	Trays
3	Paper path		

Table 3-5 Jam locations and error messages (CLJ 4600/5500)

Message	Solution
13.01.00 JAM IN TRAY X	Media is delayed in the feed area of the specified tray. **1** Open the covers and the ETB. **2** Pull media by both corners to remove it.
13.02.00 JAM IN TRAY X	Media is stuck in the feed area of the specified tray. **1** Open the covers and the ETB. **2** Pull media by both corners to remove it.
13.05.00 JAM IN PAPER PATH	Media is delayed in the paper input path or has not reached the fuser paper sensor in the expected time. **1** Open the covers and the ETB. **2** Pull media by both corners to remove it.
13.09.00 JAM IN TOP COVER AREA	Media has crumpled into an accordion fold as it enters the fuser. **1** Open the top cover. **WARNING!** The fuser is hot, wait 10 minutes for it to cool down. **2** Firmly lift the two green handles on either side of the fuser to disengage the fuser rollers. **3** Open the fuser cover, and remove the media. **4** Firmly press down on the two green handles on either side of the fuser to re-engage the fuser rollers.
13.0A.00 JAM IN TOP COVER AREA	During a duplex print job, media was delayed in the output bin before it entered the duplex path. **1** Open the top cover. **WARNING!** The fuser is hot, wait 10 minutes for it to cool down. **2** Firmly lift the two green handles on either side of the fuser to disengage the fuser rollers. **3** Pull media by both corners to remove it. **4** Firmly press down on the two green handles on either side of the fuser to re-engage the fuser rollers.

Table 3-5 Jam locations and error messages (CLJ 4600/5500)

Message	Solution
13.12.00 JAM IN DUPLEX PATH	During a duplex print job, media was removed from the output bin before it entered the duplex path, or media has entered the duplex path, but it is stuck. **1** Open the top cover and the front cover. (Do not open the ETB.) **2** Pull media by both corners to remove it.
13.21.00 JAM IN PAPER PATH	One of the covers is not completely closed. Ensure both covers are closed before printing. **1** Open the covers and the ETB. **2** Pull media by both corners to remove it.

CLJ 8500/8550 jam locations

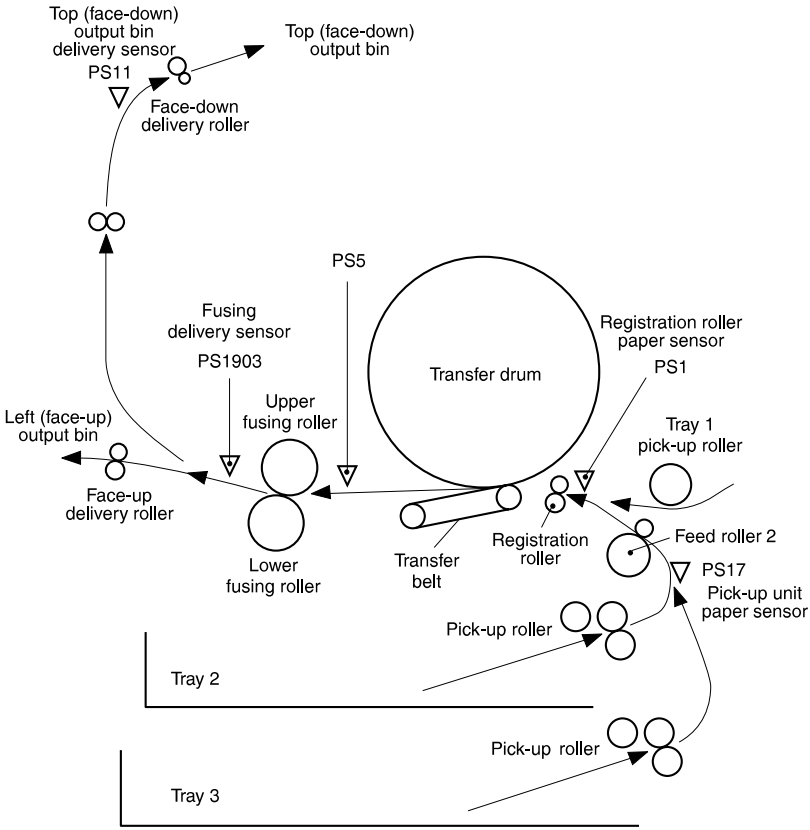

Figure 3-5 Printer paper path (CLJ 8500/8550)

Table 3-6 Jam detection (CLJ 8500/8550)

Issue	Cause
Pick-up delay jam 1	The page has not reached the pick-up unit paper sensor (PS17) within about: ● 1.2 seconds after leaving tray 2 ● 1.3 seconds after leaving tray 3

Table 3-6 Jam detection (CLJ 8500/8550) (continued)

Issue	Cause
Pick-up delay jam 2	The media does not reach the registration roller paper sensor (PS1) within about: ● 1.9 seconds after leaving tray 2 ● 2.0 seconds after leaving tray 3 ● 1.8 seconds after leaving tray 1
Transfer jam	The separation sensor (PS5) does not detect the media for the specified time or longer within 1.5 to 2.2 seconds after the top-of-paper signal: ● about 0.1 seconds (normal mode) ● about 0.4 seconds (overhead transparency mode) ● about 0.3 seconds (high-gloss mode)
Fusing delivery paper delay jam	The media has not reached the fusing delivery sensor (PS1903) since the top-of-paper signal within about: ● 3.2 seconds (normal mode) ● 12.8 seconds (overhead transparency mode) ● 9.6 seconds (high-gloss mode)
Fusing delivery stationary jam	The media has not passed through the fusing delivery sensor (PS1903) after PS1903 detects the leading edge of the media within approximately: ● 2.4 seconds (normal mode/letter-sized media landscape) ● 9.6 seconds (overhead transparency mode/letter-sized media landscape) ● 7.2 seconds (high-gloss mode/letter-sized media landscape) ● 4.2 seconds (normal mode/11-by-17 inch-sized media) ● 17.0 seconds (overhead transparency mode/11-by-17 inch-sized media) ● 12.7 seconds (high-gloss mode/11-by-17 inch-sized media)
Fusing unit paper coil jam	The fusing delivery sensor (PS1903) does not detect the media for the specified time or longer within 0.2 to 1.2 seconds after PS1903 detects the leading edge of the media within approximately: ● 0.8 seconds (normal mode) ● 3.2 seconds (overhead transparency mode) ● 2.4 seconds (high-gloss mode)

Table 3-6 Jam detection (CLJ 8500/8550) (continued)

Issue	Cause
Top (face-down) output bin delivery delay media jam	The media has not reached the top (face-down) output bin delivery sensor (PS11) within the specified time after the fusing delivery sensor (PS1903) detects the media: ● about 4.0 seconds (normal mode) ● about 16.0 seconds (overhead transparency mode) ● about 12.0 seconds (high-gloss mode)
Top (face-down) tray delivery stationary jam	The media has not passed through the top (face-down) output bin delivery sensor (PS11) after PS11 detects the media within approximately: ● 2.4 seconds (normal mode/letter-sized media landscape) ● 9.6 seconds (overhead transparency mode/letter-sized media landscape) ● 7.2 seconds (high-gloss mode/letter-sized media landscape) ● 4.2 seconds (normal mode/11-by-17 inch-sized media) ● 17.0 seconds (overhead transparency mode/11-by-17 inch-sized media) ● 12.7 seconds (high-gloss mode/11-by-17 inch-sized media)
Wrong media size feed jam	The controller board detects media size with the registration roller paper sensor (PS1), and it stops the engine if the media size differs more than 15 mm between the specified media size and the actual media size. On the other hand, if the difference is within +7.5 to 15 mm, or -3.7 mm or less, the media is automatically delivered.
Door-open jam	The sensors listed below detect the media when a cover is opened or closed: ● registration paper roller sensor (PS1) ● pick-up unit paper sensor (PS17) ● separation sensor (PS5) ● top (face-down) output bin delivery sensor (PS11) ● fusing delivery sensor (PS1903)
Initial residual jam	The sensors listed below detect the media the specified time after the power switch is turned ON: ● separation sensor (PS5) ● fusing delivery sensor (PS1903)

CLJ 9500 jam locations

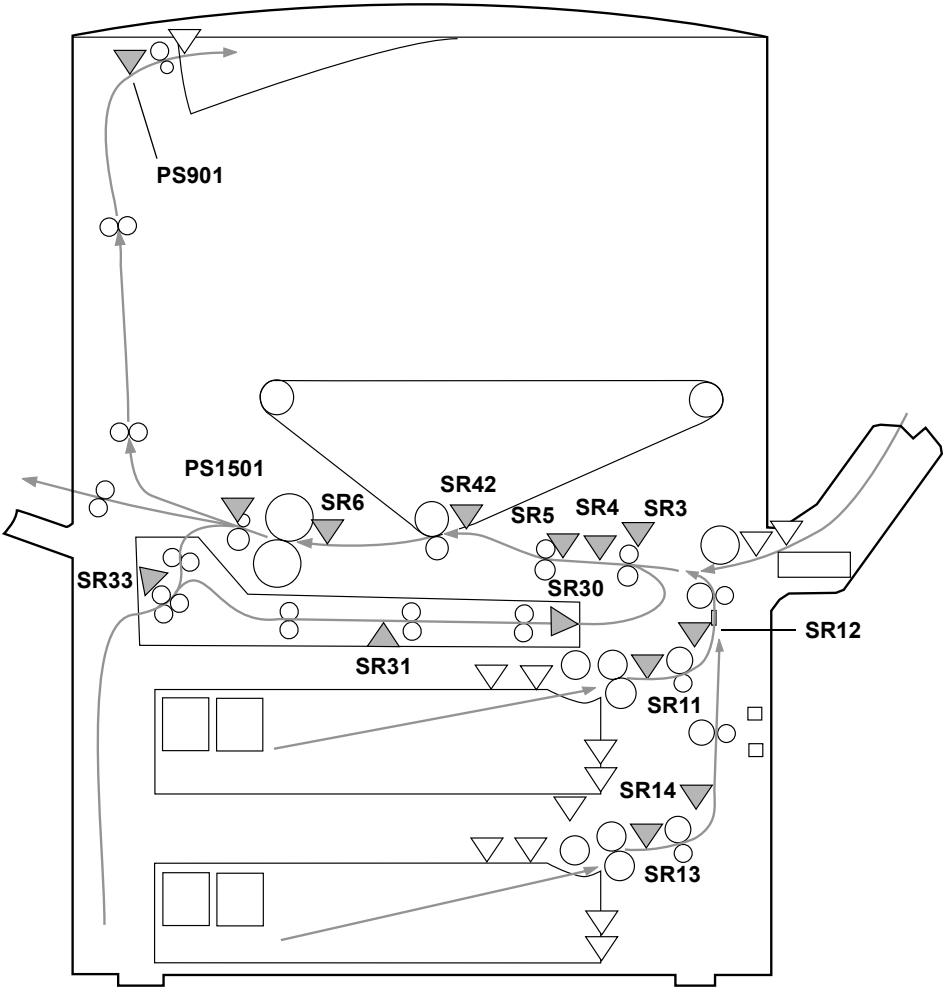

Figure 3-6 **Printer paper path (CLJ 9500)**

Table 3-7 Paper path jam sensors (CLJ 9500)

Sensor	Sensor name	Sensor	Sensor name
SR3	Registration sensor	SR14	Tray 3 sensor B
SR4	Transparency motor	SR30	Duplexer media re-feed sensor
SR5	Multifeed sensor	SR31	Duplexer media path sensor
SR6	Fuser input sensor	SR33	Duplexer reverse sensor
SR11	Tray 2 sensor A	SR42	T2 input sensor
SR12	Tray 2 sensor B	PS901	Face-down output sensor
SR13	Tray 3 sensor A	PS1501	Fuser output sensor

Note

Action for all media jams includes removing the media, checking the flags, testing the sensor with diagnostics, and checking the connectors from the sensor to the DC controller by using the wiring diagram.

Table 3-8 CLJ 9500 jam messages

Message	Solution
13.05.00 JAM INSIDE PAPER PATH	**1** Close all of the doors. **2** Clear the jam. **3** Check the front door interlock switches and all of the connections.
13.20.JJ JAM INSIDE PAPER PATH	**1** Open tray 4 and the right side door to check for jammed media. **2** Check the paper path between tray 4 and the printer. **3** Check the tray-size guides. **4** Replace the pickup, separation, or feed rollers.
13.32.00 JAM INSIDE PAPER PATH or 13.32.00 JAM INSIDE LOWER RIGHT DOOR	**1** Check the indicated tray. **2** Check the tray-size guides. **3** Open the lower right door and remove the jammed media.

Table 3-8 CLJ 9500 jam messages

Message	Solution
13.01.00 JAM INSIDE LOWER RIGHT DOOR or 13.01.00 JAM IN TRAY X	**1** Check the indicated tray or open the lower right door. **2** Remove the jammed or loose media. **3** Check the tray-size guides. **4** Replace the pick, separation, or feed rollers.
13.03.00 JAM INSIDE UPPER RIGHT DOOR or 13.03.00 JAM INSIDE LOWER RIGHT DOOR	**1** Open the tray 1 door (ITB access) and remove the jammed media. **2** Make sure that the tray 1 door is completely closed. **3** Check the paper path and tray 1 for damage. **4** Check for media in the lower right door area.
13.15.00 JAM INSIDE UPPER RIGHT DOOR	**1** Check the registration area for jammed media. **2** If the job is multifeed, check for supported media, and check the pick, separation, and feed rollers in the source tray. **3** If the media is fed from tray 1, check the separation pad. **4** Check the registration rollers for correct functionality.
13.06.00 JAM INSIDE UPPER RIGHT DOOR	**1** Remove the media from tray 1. **2** Open the ITB access door and remove the jammed media. **3** Check for supported media and correct-size specification on the control panel.
13.20.00 JAM INSIDE PAPER PATH	**1** Remove any residual media near T1 and the fuser. **2** Check the three sensors for correct movement and functionality. **3** Make sure that the fuser, ITB, and T2 roller are seated correctly.

Table 3-8 CLJ 9500 jam messages

Message	Solution
13.1D.00 JAM INSIDE PAPER PATH	**1** Remove the ITB and check for residual media. Make sure that the ITB is seated correctly and the green lever is moved to the correct position. **2** Check the fuser upstream sensor for missing flag or poor movement. **3** Check for supported media. **4** Check the discharge comb area for damage or contamination.
13.06.00 JAM INSIDE LOWER LEFT DOOR or 13.06.00 JAM INSIDE PAPER PATH	**1** Check for residual media inside and near the fuser. **2** Remove the fuser and check the exit sensor for correct movement and functionality. **3** Check the fuser rollers for damage or contamination. **4** Check the post fuser paper path for jams. **5** Reseat the fuser.
13.05.00 FUSER JAM LOWER LEFT DOOR or 13.05.00 JAM INSIDE FRONT DOOR	**1** Remove the duplexer. **2** Remove the fuser. **3** Check the post secondary transfer area and the fuser inlet area.
13.1C.00 FUSER JAM LOWER LEFT DOOR	**1** Check for supported media and media-type settings on the control panel. **2** Check for residual media inside and near the fuser. **3** Remove the fuser and check the exit sensor for correct movement and functionality. **4** Check the fuser rollers for damage and contamination. **5** Check the post fuser paper path for any obstruction. **6** Reseat the fuser.
13.11.00 JAM INSIDE LOWER LEFT DOOR or 13.10.00 JAM INSIDE DUPLEXER	**1** Check the seating of the duplexer, fuser, and fuser access door. **2** Check the face-down and duplexer diverters for correct functionality. **3** Check the fuser and duplexer area feed roller driver trains.

Table 3-8 CLJ 9500 jam messages

Message	Solution
13.11.00 JAM INSIDE LOWER LEFT DOOR or 13.11.00 JAM INSIDE DUPLEXER	**1** Remove the duplexer and check for residual media. **2** Check the seating of the duplexer, fuser, and fuser access door. **3** Check the face-down and duplexer diverters for correct functionality. **4** Check the fuser and duplexer area feed roller driver trains.
13.12.00 JAM INSIDE DUPLEXER	**1** Remove the duplexer. **2** Check the inside of the duplexer and the duplexer cavity for residual media. **3** Check the duplex delivery sensor for correct movement and functionality. **4** Check the registration guides for correct movement. **5** Check the feed rollers and drive gear trains for damage.
13.13.00 JAM INSIDE DUPLEXER	**1** Remove the duplexer. **2** Check the inside of the duplexer and the duplexer cavity for residual media. **3** Check the duplex delivery sensor for correct movement and functionality. **4** Check the registration guides for correct movement. **5** Check the feed rollers and drive gear trains for damage.
13.29.00	**1** Remove the duplexer. **2** Check the inside of the duplexer and the duplexer cavity for residual media. **3** Check the duplex delivery sensor for correct movement and functionality.
13.09.00 JAM INSIDE LOWER LEFT DOOR or 13.09.00 JAM INSIDE UPPER LEFT DOOR	**1** Check the face-down output sensor for correct movement and functionality. **2** Check the face-down and duplex diverters for correct functionality. **3** Check for deformed or misaligned delivery rollers. **4** Check the delivery feed assembly drive gear train. **5** Make sure that the upper and lower left doors are completely closed.

Table 3-8 CLJ 9500 jam messages

Message	Solution
13.0A.00 JAM INSIDE TOP OUTPUT BIN or 13.0A.00 JAM INSIDE UPPER LEFT DOOR	**1** Check for residual media near the face-down output sensor. **2** Check for obstructions in the paper path. **3** Check the feed rollers and drive gear trains for damage.
13.3E.00 JAM INSIDE TOP OUTPUT BIN or 13.3E.00 JAM INSIDE UPPER LEFT DOOR	**1** Check for residual media near the face-down output sensor. **2** Check for obstructions in the paper path. **3** Check the feed rollers and drive gear trains for damage.

Persistent jam troubleshooting

CLJ 2500

See the service notes and work instructions for this product.

CLJ 3500/3700

See the service notes and work instructions for this product.

CLJ 4500/4550

See the service notes and work instructions for these products.

CLJ 4600/5500

If jams occur repeatedly, use the information in this section to diagnose the root cause of the problem. The tables in this section list possible causes and recommended solutions for jams in each area of the paper path. Items are listed in the order in which you should investigate. In general, items at the beginning of the list are relatively minor repairs. Items at the end of the list are more significant repairs.

CLJ 4500/4550; basic troubleshooting for jams

The basic troubleshooting process for jams consists of the following:

1 Gather data.

2 Identify the cause of the problem.

3 Fix the problem.

CLJ 4500/4550; data collection

To troubleshoot jams, gather the following information:

- the exact error code that appears on the control panel
- the location of the leading edge of the media in the paper path
- whether media is in the paper path when the jam occurs, or if media is stuck in the input tray
- whether the jam occurs at power-up or while paper is moving
- whether the media is damaged, and if it is, where the damage occurs on the media and where in the paper path the media stops
- whether the jam occurs when feeding from one particular tray

- whether the jam occurs only when using duplex printing
- whether a particular type of media is jamming
- whether any of the supplies are non-HP (non-HP supplies are known to cause jams)
- whether the customer is storing the media correctly, overloading the trays, damaging the edge of the media during loading, or using media that has already been fed through the printer

CLJ 4500/4550; general paper path troubleshooting

Use the following suggestions to isolate the cause of the problem. After you have identified the cause, use the tables that follow to find a recommended solution.

Note

Use the paper path test in the Diagnostics menu to print pages while troubleshooting. For more information, see “CLJ 4600/5500 paper-path test” on page 290.

- View or print the event log and determine if a particular jam error occurs more often than others. Try to identify a pattern.
- From the event log, determine the frequency of a particular jam. If a jam occurs repeatedly around the same page count, consider this a single jam that the customer tried to clear.
- Try printing from all available input trays to identify whether the problem is isolated to one tray.
- Print the job in both simplex and duplex modes to identify if the problem occurs only in one mode or the other.
- Try printing on paper from an unopened ream that has been stored correctly. If the jam does not occur with this media, then the customer’s media might be causing the problem.
- If the jam occurs from when the printer is turned on, check the paper path for small torn pieces of paper. Also check for broken sensors or flags, and check for loose or defective connections.
- If the paper is torn, folded, or wrinkled (typically along the leading edge), inspect the paper path for items that could be causing the damage.
- If the customer is using non-HP supplies, try replacing those supplies with genuine HP supplies to see if the problem goes away.
- If necessary, instruct the customer on proper media storage, correct loading technique, and printer operation. Make sure the customer knows not to grab paper in the output bin during duplex printing.

CLJ 4500/4550; paper path checklist

- Verify that media is correctly loaded in the input trays and that all length and width guides are set correctly.
- Clean the printer. Toner and paper dust in the paper path can inhibit free movement of media through the printer and can block the sensors.
- Use the paper-path test in the Diagnostic menu to vary the input selections of the printer to determine if the problem is associated with a particular area of the printer.
- Worn rollers or separation pads can cause multifeeds. Check the condition of the pickup rollers and separation pads. Bent separation tabs (on the front corners of the input trays) can cause misfeeds and multifeeds. Replace the tray if necessary.
- Defective paper tray switches can cause jams by communicating the wrong paper size to the formatter.
- Defective paper sensors along the paper path might signal a false jam.
- Scraps of media left in the paper path can cause intermittent jams. Always check that the paper path is clear when cleaning the printer and when clearing jams. Also, remove the fuser and carefully check it for debris.

CLJ 4600/5500; jams in tray 1

Table 3-9 Causes for jams in tray 1 (CLJ 4600/5500)

Issue	Solution
Pickup roller is dirty, worn, or damaged.	Clean the pickup roller. If it is still dirty after cleaning, or if it is worn or damaged, replace the pickup roller.
Separation pad is defective.	Clean the separation pad. If it is still dirty after cleaning, or if it is worn or damaged, replace the separation pad.
Drive gears are damaged.	Check the drive gears in the paper pickup unit. Replace the pickup drive assembly if the gears are damaged.
Multipurpose tray pickup solenoid is defective.	**1** Disconnect the connector J1020 for the multipurpose tray pickup solenoid from the DC controller PCB. **2** Measure the resistance between the cable-side connectors J1020-11 and J1020-10. **3** If the measured resistance is NOT about 160 ohms, replace the multipurpose tray pickup solenoid.
Pickup motor is defective.	Replace the paper pickup drive assembly.
Paper pickup assembly is defective.	Replace the paper pickup assembly.
DC controller PCB is defective.	Replace the DC controller PCB. Calibrate the printer after replacing the DC controller.

CLJ 4600/5500 jams in tray 2

Table 3-10 Causes for jams in tray 2 (CLJ 4600/5500)

Issue	Solution
Separation tabs in the paper cassette are deformed.	Straighten the tabs on the front corners of the tray, or replace the cassette.
Pickup roller is worn or damaged.	Replace the pickup roller.
Feed roller is dirty, worn, or damaged.	Clean the feed roller. If it is still dirty after cleaning, or if it is worn or damaged, replace the feed roller.
Drive gears are damaged.	Check the drive gears in the paper pickup unit. Replace the pickup drive assembly if the gears are damaged.
Cassette pickup solenoid is damaged.	**1** Disconnect the connector for the cassette pickup solenoid from the DC controller PCB. **2** Measure the resistance between the cable-side connectors J1020-13 and J1020-12. **3** If the measured resistance is NOT about 160 ohms, replace the cassette pickup solenoid.
Pickup motor is defective.	Replace the paper pickup drive assembly.
Paper pickup assembly is defective.	Replace the paper pickup assembly.
DC controller PCB is defective.	Replace the DC controller PCB. Calibrate the printer after replacing the DC controller.

CLJ 4600/5500; jams in tray 3

Table 3-11 Causes for jams in tray 3 (CLJ 4600/5500)

Issue	Solution
Separation tabs in the paper cassette are deformed.	Straighten the tabs on the front corners of the tray, or replace the cassette.
Pickup roller is worn or damaged.	Replace the pickup roller.
Feed roller is dirty, worn, or damaged.	Clean the feed roller. If it is still dirty after cleaning, or if it is worn or damaged, replace the feed roller.
Drive gears are damaged.	Check the drive gears in the paper pickup unit. Replace the pickup drive assembly if the gears are damaged.
Connector to the printer has poor contact.	Reconnect all connectors to the printer. Replace any damaged connectors.
Paper feeder pickup solenoid is damaged.	**1** Disconnect the connector J4006 for the paper feeder solenoid from the paper feeder PCB. **2** Measure the resistance between the cable-side connectors J4006-2 and J4006-1. **3** If the measured resistance is NOT about 160 ohms, replace the paper feeder pickup solenoid.
Pickup motor is defective.	Replace the paper pickup drive assembly.
Paper feeder PCB is defective.	Replace the paper feeder PCB.
Paper pickup assembly is defective.	Replace the paper pickup assembly.
DC controller PCB is defective.	Replace the DC controller PCB. Calibrate the printer after replacing the DC controller.

CLJ 4600/5500; jams in the paper path

Table 3-12 Causes for jams in the paper path (CLJ 4600/5500)

Issue	Solution
Registration shutter is defective. (This applies to jams that occur before the registration roller.)	Make sure that the shutter is clean, that it moves smoothly, and that the spring is in place. If the shutter is damaged, replace the paper pickup assembly.

Table 3-12 Causes for jams in the paper path (CLJ 4600/5500)

Issue	Solution
Drive gears are damaged. (This applies to jams that occur before the registration roller.)	Check the drive gears in the paper pickup unit. Replace the pickup drive assembly if the gears are damaged.
Registration roller and registration sub roller are dirty, worn, or damaged. (This applies to jams that occur before the registration roller.)	Clean the registration roller or registration sub roller if it is dirty. If it is still dirty after cleaning, or if it is worn or damaged, replace the paper pickup assembly.
Attaching roller is damaged. (This applies to jams in which paper is crumpled into an accordion as it enters the ETB.)	Check if the attaching roller is damaged. If it is damaged, replace the ETB. Calibrate the printer after replacing the ETB.
Cartridge shutter open/close mechanism is damaged. (This applies to jams in which paper is crumpled into an accordion fold somewhere on the ETB belt.)	The shutters in each print cartridge should open as you close the ETB. If a shutter does not open, replace that print cartridge. Also check for a damaged shutter mechanism in the printer.
Cartridge drive motor assembly is damaged.	Inspect the cartridge drive assembly in each print cartridge. If any are damaged, replace the assembly for that print cartridge.
Attaching roller is defective.	Make sure the attaching roller is clean and the spring is in place. If the roller is damaged, replace the ETB. Calibrate the printer after replacing the ETB.
Paper leading edge sensor is defective.	Replace the pickup PCB.
DC controller PCB is defective.	Replace the DC controller PCB. Calibrate the printer after replacing the DC controller.

CLJ 4600/5500; jams in the top cover

Table 3-13 Causes for jams in the top cover (CLJ 4600/5500)

Issue	Solution
Fuser paper sensor or sensor lever is defective.	Make sure the fuser paper sensor lever moves smoothly and is set in place. Replace the lever if it is damaged. Replace the sensor if it is defective.

Table 3-13 Causes for jams in the top cover (CLJ 4600/5500)

Issue	Solution
Fuser sleeve or pressure roller does not rotate smoothly.	If the fuser drive gears are worn or damaged, replace the fuser.
Fuser inlet guide is dirty or has built-up toner.	Clean the fuser inlet guide.
Fuser sleeve or pressure roller is dirty, worn, or damaged.	Clean the fuser sleeve or pressure roller. If it is damaged, replace the fuser.
Fuser delivery sensor or sensor lever is defective.	Make sure the fuser delivery sensor lever moves smoothly and is set in place. Replace the lever if it is damaged. Replace the sensor if it is defective.
Fuser delivery roller is worn.	Replace the fuser.
Fuser delivery roller drive gears are worn or damaged.	Replace the fuser.
Face-down delivery roller is defective.	Replace the fuser.
DC controller PCB is defective.	Replace the DC controller PCB. Calibrate the printer after replacing the DC controller.

CLJ 4600/5500; jams in the duplex path

Table 3-14 Causes for jams in the duplex path (CLJ 4600/5500)

Issue	Solution
Oblique rollers are worn or damaged.	Replace the oblique rollers.
Oblique roller drive gears are worn or damaged.	Replace the ETB unit. Calibrate the printer after replacing the ETB.
Duplex feed guide is damaged.	Replace the ETB unit. Calibrate the printer after replacing the ETB.

CLJ 8500/8550

Use this checklist to identify and resolve transfer wrap Jams (TWJ). Make sure to educate the customer about why such jams occur and how to prevent them in the future. You cannot resolve transfer wrap jams by replacing any hardware on the printer. Extensive testing and analysis has pointed out these observations:

- Transfer wrap jams occur when the leading edge of the paper does not properly fall away from the Intermediate Transfer Drum (ITD). Paper with high moisture content *will* jam in *some* printers. Paper with a rough edge is more susceptible to this type of jam.
- The number one cause of TWJ is print media with moisture content beyond appropriate specification (4% to 6% by weight). If the media has too much moisture, the stiffness decreases dramatically and causes the paper *not* to fall away from the ITD properly.
- The CLJ 8500/8550 is the *only* LaserJet product with an Intermediate Transfer Drum. The curvature of the drum and the natural curl of some paper can lead to TWJ. Heavier media (24 lb and greater) falls away from the ITD more easily because of its weight and stiffness.
- Paper is hygroscopic; it gives up or absorbs moisture depending on the environment. Paper left overnight in a tray may absorb enough moisture to cause problems the following day. Likewise, paper left unwrapped might also absorb enough moisture to cause problems.
- Paper that is stored outside an “office environment” might require as many as 2 weeks of storage near the printer before it returns to a moisture content within specifications.
- `CLEAR TRANSFER JAM` is reported as 13.00.10 in the event log. For a printer with a High Capacity Output (HCI) tray, 13.x1.31 and 13.x1.3B are usually present because pages are being fed through the Vertical Transfer Unit (VTU) when the jam occurs in the printer. If the customer fails to clear these pages, the jams are reported when the customer attempts to restart the printer.
- Duplexing can lead to TWJ because of the fusing of the first side. The temperature of the fuser causes some moisture to vaporize out of the media; the pressure of the rollers may induce curl in the paper. On the second pass, TWJ might occur depending the orientation of the curl.
- The reports of TWJ increase dramatically in the United States during the summer months and are typically related to areas with high relative humidity (higher than 50% relative humidity).

Clearing repeated jams (CLJ 9500)

1. Make sure that the media is loaded correctly in trays and that all width guides are set correctly (not skewed).
2. Try turning over the stack of media in the tray. If you are using letterhead media, try printing from a different tray.
3. Do *not* use previously printed media or torn, worn, or irregular media.
4. Check the media specifications. If it is outside of the recommended specifications, problems might occur. See the *HP LaserJet Printer Family Print Media Guide.*
5. The printer might be dirty.

4 Print quality

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Printer cleaning page

Table 4-1 Printer cleaning page

Product*	Instructions
CLJ 2500	The following procedure must be performed from the HP Color LaserJet 2500 Series Toolbox, which is supported for Windows 98, NT 4.0, Me, 2000, and XP. To clean the engine when the computer is running a different supported operating system, see the Readme on the software CD-ROM, or visit http://www.hp.com/support/clj2500. **1** Make sure that the product is turned on and in the Ready state. **2** Open the HP Color LaserJet 2500 Series Toolbox. **3** On the **Troubleshooting** tab, click **Cleaning Page**, and then click **Print**. A page with a pattern prints from the product. **4** At the product, remove any media from tray 1 (multipurpose tray). **5** Remove the page that printed and load it face-down into tray 1. **6** At the computer, click **Clean**. For even better results, repeat this procedure several times.
CLJ 3500 CLJ 3700	**1** Press MENU to enter the menus. **2** Press the DOWN ARROW button to highlight CONFIGURE DEVICE, and then press the SELECT button. **3** Press the DOWN ARROW button to highlight PRINT QUALITY, and then press the SELECT button. **4** Press the DOWN ARROW button to highlight CREATE CLEANING PAGE, and then press the SELECT button. A page with a pattern prints from the printer. **5** Remove all media from Tray 1. **6** Remove the cleaning page and load it face-down in Tray 1. **Note** if you are not still in the menus, navigate to PRINT QUALITY by using these instructions. **7** At the printer control panel, press the DOWN ARROW button to highlight PROCESS CLEANING PAGE, and then press the SELECT button. The message CLEANING appears on the control-panel display. The cleaning process takes a few minutes.

Table 4-1 Printer cleaning page (continued)

Product*	Instructions
CLJ 4500 CLJ 4550	The CLJ 4500/4550 do not include this feature.
CLJ 4600 CLJ 5500	The CLJ 4600/5500 do not include this feature.
CLJ 8500 CLJ 8550	The CLJ 8500/8550 do not include this feature.
CLJ 9500	Find `PROCESS CLEANING PAGE` in the Print Quality menu under the Configure Device menu.

Life expectancies of print cartridges

Table 4-2 Life expectancies of print cartridges

Product	Description	Estimated life* (at 5% coverage*)
CLJ 2500	Black print cartridge	5,000 pages
	Cyan print cartridge	4,000 pages
	Yellow print cartridge	4,000 pages
	Magenta print cartridge	4,000 pages
CLJ 3500	Black print cartridge	6,000 pages
	Color print cartridges	4,000 pages
CLJ 3700	Print cartridges	6,000 pages
CLJ 4500 CLJ 4550	Black print cartridge	9,000 pages
	Cyan print cartridge	6,000 pages
	Yellow print cartridge	6,000 pages
	Magenta print cartridge	6,000 pages
CLJ 4600	Black print cartridge	9,000 pages
	Cyan print cartridge	8,000 pages
	Yellow print cartridge	8,000 pages
	Magenta print cartridge	8,000 pages
CLJ 5500	Black print cartridge	13,000 pages
	Cyan print cartridge	12,000 pages
	Yellow print cartridge	12,000 pages
	Magenta print cartridge	12,000 pages
CLJ 8500 CLJ 8550	Black print cartridge	17,000 pages
	Cyan print cartridge	8,500 pages
	Yellow print cartridge	8,500 pages
	Magenta print cartridge	8,500 pages

Table 4-2 Life expectancies of print cartridges

Product	Description	Estimated life* (at 5% coverage*)
CLJ 9500	Black print cartridge	25,000
	Cyan print cartridge	25,000
	Yellow print cartridge	25,000
	Magenta print cartridge	25,000

* The estimated toner cartridge life is based on letter- or A4-sized paper with an average of 5% toner coverage and a medium density setting. In some HP color LaserJet products, print cartridge life can be extended further by using the draft-mode settings, which conserves toner.

Image quality

For information and examples of image defects, see your product service manual.

Note

Whenever you experience color-related issues, calibrate the product before trying any other steps.

Drum functional test

Note

The CLJ 2500, CLJ 3500, CLJ 3700, CLJ 4600, CLJ 5500, and CLJ 9500 do not support the drum functional test.

Table 4-3 Drum functional test

Product	Instructions
CLJ 4500 CLJ 4550	**1** Press the ITEM key until ENGINE DIAGS DRUM TEST appears. **2** Press the SELECT key to run the test. The front panel will show ENGINE DIAGS E3:DRUM while the test is running. Watch to see if the ITB lift cams turn and if both the drum drive gear and the ITB drive gear are rotating.
CLJ 8500 CLJ 8550	**1** Press the left side of the ITEM button and the -VALUE+ button at the same time. **2** Press ITEM until DRUM MOTOR appears on the display. **3** Press -VALUE+ until EXECUTE TEST appears on the display. **4** Press SELECT to initiate the drum test.

Print density test and color checks

Use the configuration page to check the print density of the black, primary, and process color levels. Solid black- and color-filled areas on the configuration page demonstrate the ability to print at full density.

In addition to the items listed above, the configuration page provides the following information:

- It helps isolate the problem to the software or the product.
- It shows that all colors print.

The following media-related items are responsible for many image formation and print-quality defects:

- rough paper
- heavy paper
- transparencies out of the specified thickness range
- paper that has absorbed too much moisture from the atmosphere
- the effect of the room environment (humidity too high or low)

Understanding color variations

The printed output might not match the computer screen, and the colors printed on successive pages might not match. While color variations are inherent in this printing method, they can indicate changes in the printing environment, print media, or product components.

Common causes of color variation

The following list outlines the major causes of color variations between computers, applications, and output devices.

- Halftone patterns produced on monitors and the types of patterns used in the print jobs are different and might cause variations in the printed output.
- The printed output differs from the image on the monitor because the monitor and the print media have different reference values of black and white. The monitor screen has charcoal gray for the black level, and the white on the monitor screen is actually blue. Black on the print media is limited only by the fill capability of the product, and most good quality paper has a very high white level. In addition, phosphor (used in color monitors) and toner have entirely different spectra characteristics and different color-rendering capabilities. Differences between output are common. Blues generally match better than reds.
- The color of the ambient light changes the perception of color. Fluorescent light lacks many colors present in incandescent light, and the color range of natural light is broader than any artificial light. When comparing color, choose a standard light source for reference and understand that the perceived color will change as the light changes.
- Long-term color variations occur as paper ages. Use high-quality paper and protect the paper from sunlight to help minimize discoloration.
- Environmental changes can cause color variation. The development process places a high potential across an air gap to attract toner to the imaging drum. Changes in relative humidity vary the point at which the toner travels to the imaging drum.
- All consumable components have a finite life span, and as these components reach the end of their useful life, their ability to produce consistent print quality diminishes.
- Paper roughness can cause colors to look different. Use standard paper.

Color selection process

The user selects the color in the software program, but the operating system might convert or modify some characteristics of the color before sending the information to the printer driver. The printer driver might also modify color characteristics depending upon the selected output mode.

Any color characteristics not addressed by the printer driver or software programs are set to the product default. The default color might not match the color the user selected.

Adjusting color balance

These products feature automatic color calibration to provide high-quality color output. In situations that require critical color control, you can manually adjust the density balance of the product's four toner colors.

CAUTION

Performing this procedure changes the color balance of the product by altering halftones and affects *all* print jobs.

Note

Whenever you experience color-related issues, calibrate the product before trying any other steps.

Table 4-4 Adjusting color calibration

Product	Instructions
CLJ 3500 CLJ 3700	The Automatic color adjustment option optimizes the neutral gray color treatment, halftones, and edge enhancements used for each element in a document. For more information, see the printer driver online Help. **Note** Automatic is the default setting and is recommended for printing all color documents. Use the Manual color adjustment option to adjust the neutral gray color treatment, halftones, and edge enhancements for text, graphics, and photographs. To use the Manual color options, on the COLOR TAB, select MANUAL, and then SETTINGS.
CLJ 4500 CLJ 4550	**Print a calibration page** **1** Press MENU until CALIBRATION MENU appears. **2** Press ITEM until PRINT CALIBRATION PAGE appears. **3** Press SELECT to print the color balance calibration page. The page consists of four color bars (cyan, magenta, yellow, and black) and a box containing gray balance circles. The factory default setting for each color is zero. The range of settings is -5 to +5. **Note** Adjusting densities using the four color bars provides coarse color-balance adjustments. After making these adjustments, you can fine-tune color densities by adjusting the gray balance. (See step 4 for instructions.)

Table 4-4 Adjusting color calibration (continued)

Product	Instructions
CLJ 4500 CLJ 4550 continued	**Adjust color density** **1** Examine the cyan density bar (C), the magenta density bar (M), the yellow density bar (Y), and the black density bar (K) on the color balance calibration page from a distance of 2 meters (6 feet). If the center oval for each bar matches the background pattern more than the other ovals, the color density does not need to be adjusted. If an oval left of center or right of center matches the background more than the center oval, proceed to step 2. **1** Press ITEM until [COLOR] DENSITY appears. **2** Press the right side of the VALUE key to increase the value, or press the left side to decrease it, until the number corresponding to the oval that most closely matches the background pattern appears. **3** Press SELECT to save the value. An asterisk (*) appears next to the selected setting. **4** Repeat step 1. **Adjust gray balance** **1** Adjusting densities using the gray balance pattern allows you to fine-tune color balance. This process affects all four color bars. Examine the gray balance circles in the box at the bottom of the color balance calibration page. If the circle in the center most closely matches the background pattern, then the gray balance does not need to be adjusted. If the circle does not match, proceed to step 2. **2** Locate the gray circle that most closely matches the background. The magenta (M) and yellow (Y) numbers associated with this circle indicate the optimum gray balance settings for these colors. **3** Adjust the magenta and yellow settings (yellow is horizontal and magenta is vertical) until the gray circle is in the middle. Use the values from the bars above to select the value to be entered. **4** After making adjustments to the magenta and yellow settings, press GO to return the product to the READY state.

Table 4-4 Adjusting color calibration (continued)

Product	Instructions
CLJ 4600 CLJ 5500	**1** Press SELECT to enter the MENUS. **2** Press DOWN ARROW to highlight CONFIGURE DEVICE MENU. **3** Press SELECT to select CONFIGURE DEVICE MENU. **4** Press DOWN ARROW to highlight PRINT QUALITY. **5** Press SELECT to select PRINT QUALITY. **6** Press DOWN ARROW or UP ARROW to highlight ADJUST COLOR. **7** Press DOWN ARROW or UP ARROW to highlight the desired color. **8** Press DOWN ARROW or UP ARROW to highlight the correct density setting. **9** Press SELECT to select the density setting. **10** Press RIGHT or LEFT ARROW to set the density for the next color. **11** After setting the density for each color, press PAUSE/RESUME.
CLJ 8500 CLJ 8550	Do not perform the color balance adjustment procedure until all of the following troubleshooting methods have been completed: ● Experiment with the printer driver and software settings to adjust the color output. ● Clean the density sensor. ● Complete the troubleshooting solutions listed in the service manual.
	Print the color adjust page **1** Press GO and -VALUE+ at the same time. COLOR ADJUST MENU appears on the product control panel display. **2** Press ITEM until PRINT TEST PAGE appears on the display. **3** Press SELECT to print the color adjust page. **4** Press GO to exit the Color Adjust Menu. **5** Note the numbers beside the red arrows for later reference. **6** The color adjust page indicates the last set of saved color settings with a red arrow next to the saved setting. The default for each color is 0 (other possible settings consist of -6 through 6). **7** Determine the color adjustment numbers for each color in the color ramps. **8** Examine the color adjust page from a distance of 6 feet (approximately 2 m). Find the circle of each color that most closely matches the background color. It might be necessary to squint slightly to match the colors. Record the number in the circle.

Table 4-4 Adjusting color calibration (continued)

Product	Instructions
CLJ 8500 CLJ 8550 continued	**9** Press GO and -VALUE+ at the same time. COLOR ADJUST MENU appears on the display. **10** Press ITEM until the option you want appears on the display. **11** Press -VALUE+ until the number recorded earlier appears on the display. **12** Press SELECT to enter the number into the product memory. An asterisk (*) appears to the right of the selection. **13** Repeat steps above to adjust the color screens, as necessary. Reprint the color adjust page **14** Examine the new color adjust test page and verify that the color adjustment is correct. • Verify that each of the color ramps (black, cyan, magenta, and yellow) matches the background for each color and has a red arrow next to the circle. If another circle matches the background more closely, return to step 4 to reset the values at the control panel to the number shown in that circle. • Verify that the circles in the neutral axis areas of the color adjust test page are neutral gray (gray without a color tint), and then verify that one of the circles in the ramp is a color very close to the background. If the circles are not neutral gray, additional corrections to cyan, magenta, or yellow might be necessary. If there is an overall tint of color in the circles, make the adjustments suggested by the following table. However, the most accurate correction is determined by the circles in the individual black, cyan, magenta, and yellow ramps.

Table 4-4 Adjusting color calibration (continued)

Product	Instructions
CLJ 9500	The HP color LaserJet 9500 features automatic color calibration to provide high-quality color output. In some situations, you can manually adjust the density balance of the four primary toner colors. The available range for each color is from -5 to +5. The default value is 0. **CAUTION** Performing this procedure changes the color balance of the printer by altering primary transfer biases and affects *all* print jobs. **Note** This procedure only has an affect on midtone colors. Solid or very light fills are not affected. **1** Press ✓ to open the menus. **2** Use ▲ or ▼ to scroll to CONFIGURE DEVICE, and then press ✓ . **3** Use ▲ or ▼ to scroll to PRINT QUALITY, and then press ✓ . **4** Use ▲ or ▼ to highlight ADJUST COLOR. **5** Use ▲ or ▼ to highlight the desired color. **6** Use ▲ or ▼ to highlight the correct density setting. **7** Press ✓ to select the density setting. **8** Press ⮌ to set the density for the next color. **9** After setting the density for each color, press PAUSE/RESUME. The default values is 0 for each color, a greater negative number might result in lighter or less dense mid-tones for a particular color plane, and a greater positive number might result in darker or more dense mid-tones for a particular color plane.

Repetitive defects troubleshooting

Repetitive defects are defects that occur on the page. Most repetitive defects are caused by problems with one of the following parts:

- Developer roller
- Charge roller
- Cleaning roller
- Transfer roller
- Fuser
- Imaging drum
- Transfer belt or transfer drum

See the service manual for the specific product model for the appropriate repetitive defect ruler.

The first occurrence of a repetitive print defect is the defect closes to the leading edge of the media. Measure from the first occurrence of the print defect to the first repetition of the defect and compare this measurement to the repetitive defect table in this section

CAUTION

Do not expose the imaging drum to light, and be careful not to scratch or get fingerprints on the drum surface during cleaning. Do not blow on the imaging drum.

Imaging-drum defects

The following are some causes of imaging-drum defects:

- Damage such as scratches or dents on the imaging drum. These usually appear as black or white marks on the page.
- Paper dust adhering to the imaging drum. These usually appear as white marks in the dark printed areas of the page.
- Exposure of portions of the imaging drum to light. This causes light sections in the printed output. The life of the imaging drum is shortened by exposure to light.

Take these actions to solve preoblems that are related to these defects:

- Print at least four configuration pages to determine if the defect repeats in the same horizontal orientation.
- Inspect the imaging drum for scratches, dents, or other damage. Replace if needed.
- If the problem is dust, remove the dust with isopropyl alcohol applied with a lint-free, static-free wipe. Try this only if the print defect is unacceptable and the only other alternative is replacing the imaging drum.
- Defects caused by exposure to light might clear up over time. If severe, replace the imaging drum.

Note

The following defect rulers are to scale if this manual is printed on A5-size paper.

Table 4-5 Repetitive defects

Product	Distance	Probable cause
CLJ 2500	22.1 mm (0.87 inch)	Pre-ICL roller
	33.9 mm (1.33 inches)	Developer sleeve
	37.9 mm (1.49 inches)	ICL roller
	38.1 mm (1.50 inches)	Charging roller
	41.9 mm (1.65 inches)	RS roller
	44.3 mm (1.74 inches)	T1 transfer
	56.9 mm (2.24 inches)	T2 transfer
	66.6 mm (2.62 inches)	Pressure roller
	75.6 mm (2.98 inches)	Fuser film
	89.0 mm (3.5 inches)	Transfer belt drive roller
	90.0 mm (3.54 inches)	Transfer belt tension roller
	148.3 mm (5.84 inches)	Cartridge drum
CLJ 3500 CLJ 3700	26 mm (1.00 inch)	Primary charging roller
	28 mm (1.10 inches)	Face-down delivery sub roller
	38 mm (1.50 inches)	Developing cylinder
	41 mm (1.60 inches)	Tray 2 feed sub roller Registration sub roller Preasure roller Face-down delivery roller
	42 mm (1.65 inches)	Tray 2 feed roller
	44 mm (1.73 inches)	Registration roller
	46 mm (1.80 inches)	Fuser delivery roller
	75 mm (2.95 inches)	Fuser sleeve
	77 mm (3.00 inches)	Photosensitive drum
	Mark appears at the leading edge of the image with no repatition.	Cassesette pickup roller or Multipurpose tray pickup roller

Table 4-5 Repetitive defects (continued)

Product	Distance	Probable cause
CLJ 4500/4550	40 mm (1.6 inches)	Charge roller
	152 mm (6.0 inches)	Imaging drum
	37 mm (1.5 inches)	Black developer sleeve
	30 mm (1.2 inches)	Color developer sleeve
	131 mm (5.2 inches)	Fuser
	40 mm (1.6 inches)	ITB ICL roller
	53 mm (2.1 inches)	Transfer roller
CLJ 4600	14 mm (0.5 inch)	Toner charging roller
	33 mm (1.3 inches)	Developing cylinder
	38 mm (1.5 inches)	Primary charging roller media attaching roller fuser delivery roller
	39 mm (1.5 inches)	Toner feed roller
	44 mm (1.7 inches)	cassette feed sub roller
	49 mm (1.9 inches)	face-down delivery roller
	54 mm (2.1 inches)	cassette feed roller registration roller
	57 mm (2.2 inches)	registration sub roller
	63 mm (2.5 inches)	Fuser pressure roller
	75 mm (2.9 inches)	Photosensitive drum or transfer roller (center-to-center distance)
	94 mm (3.7 inches)	photosensitive drum
	107 mm (4.2 inches)	Fuser sleeve

Table 4-5 Repetitive defects (continued)

Product	Distance	Probable cause
CLJ 5500	14 mm (0.5 inch)	Toner charging roller
	36 mm (1.4 inches)	Developing cylinder
	38 mm (1.5 inches)	Fuser delivery roller
	41 mm (1.6 inches)	Print cartridge Output bin delivery roller
	43 mm (1.7 inches)	Toner feed roller
	44 mm (1.7 inches)	Transfer/media attaching roller
	53 mm (2.0 inches)	Registration roller
	63 mm (2.5 inches)	Sub-registration roller
	79 mm (3.0 inches)	Fuser pressure roller
	82 mm (3.2 inches)	Transfer roller
	94 mm (3.7 inches)	Photosensitive drum Cassette feed roller Cassette separation roller
	107 mm (4.2 inches)	Fuser sleeve
CLJ 8500/8550	38 mm (1.5 inches)	Color developer roller
	44 mm (1.7 inches)	Charging roller
	52 mm (1.9 inches)	Black developer roller
	56 mm (2.2 inches)	Cleaning roller
	65 mm (2.6 inches)	Developer DSD wheels
	66 mm (2.7 inches)	Transfer roller
	105.5 mm (6.0 inches)	Fuser
	195 mm (7.8 inches)	Image drum
	222 mm (8.9 inches)	Transfer belt

Table 4-5 Repetitive defects (continued)

Product	Distance	Probable cause
CLJ 9500	27 mm (1.06 inches)	K developer (x1)
	30 mm (1.18 inches)	CMY developer (x3)
	45 mm (1.77 inches)	Charger roller (x4)
	52 mm (2.04 inches)	T1 backing roller (x4 on ITB)
	71 mm (2.8 inches)	T2 roller
	73 mm (2.87 inches)	T2 backing roller (on ITB)
	98 mm (3.86 inches)	OPC (x4)
	100 mm (3.93 inches)	ITB driver roller
	100 mm (3.93 inches)	Cleaning backing roller
	100 mm (3.93 inches)	Space between T1s
	140 mm (5.51 inches)	Fuser bottom
	148 mm (5.83 inches)	Fuser top

5 Illustrations

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Major components

CLJ 2500 major components

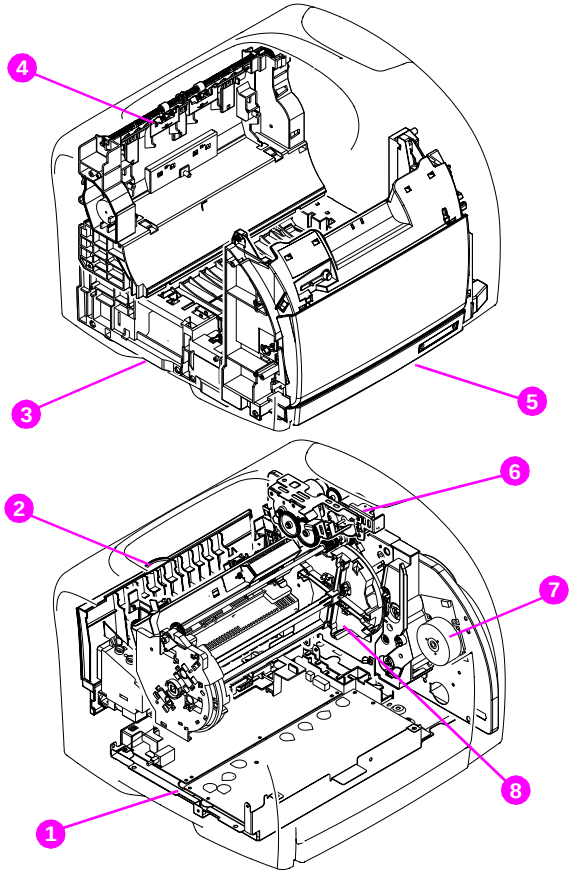


Figure 5-1 **CLJ 2500 assembly locations without optional trays**

Reference	CLJ 2500 component	Reference	CLJ 2500 component
1	Power-base assembly	5	Front frame assembly
2	Fuser assembly	6	Rotary-drive assembly
3	Middle frame assembly	7	Main drive assembly
4	Rear frame assembly	8	Rotary (carousel) assembly

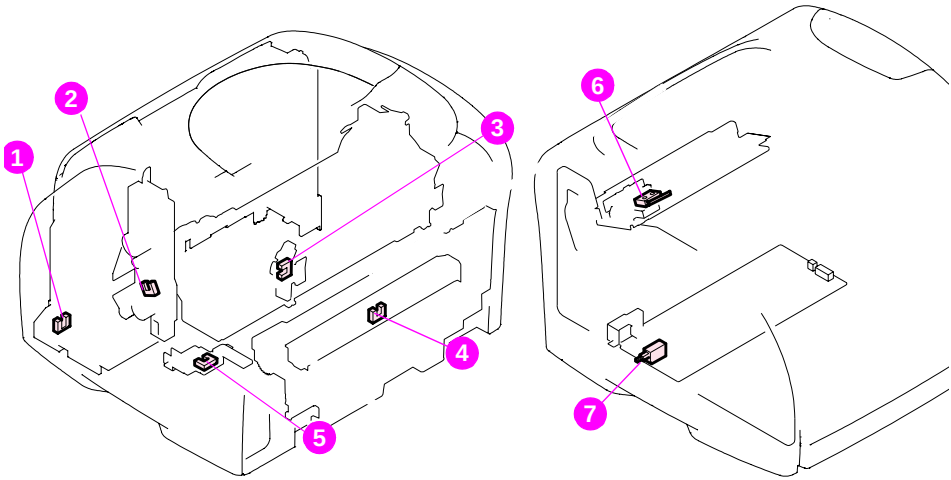


Figure 5-2 CLJ 2500 photosensors and switches

Reference	CLJ 2500 component
1	Tray 1 sensor
2	Roller-engaging sensor
3	Developing-rotary-engaging sensor
4	Fuser-delivery sensor
5	Front fuser detection sensor
6	Door-open detection switch
7	Power switch

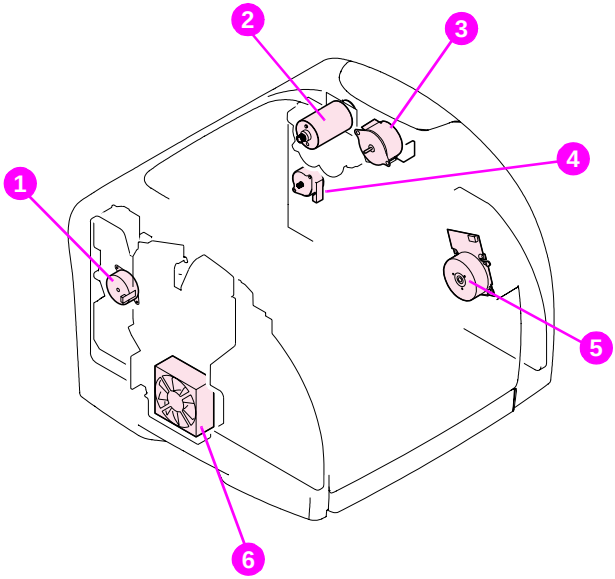


Figure 5-3 CLJ 2500 motors and fans

Reference	CLJ 2500 component	Reference	CLJ 2500 component
1	Engaging motor	4	Fuser motor
2	Developing-rotary motor	5	Main motor
3	Toner-cartridge motor	6	Cooling fan

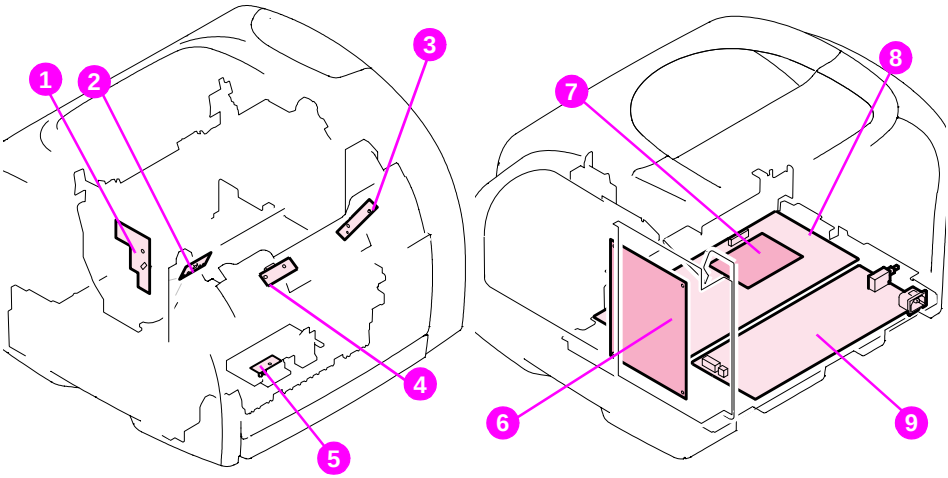


Figure 5-4 CLJ 2500 printed circuit assemblies

Reference	CLJ 2500 component
1	Developing-rotary/toner-level detection PCA
2	Transfer-belt home-position detection PCA
3	Density-detection PCA
4	Waste-toner-detection PCA
5	Registration-detection PCA
6	Dc controller
7	Sub high-voltage power-supply PCA
8	High-voltage power-supply PCA
9	Power supply

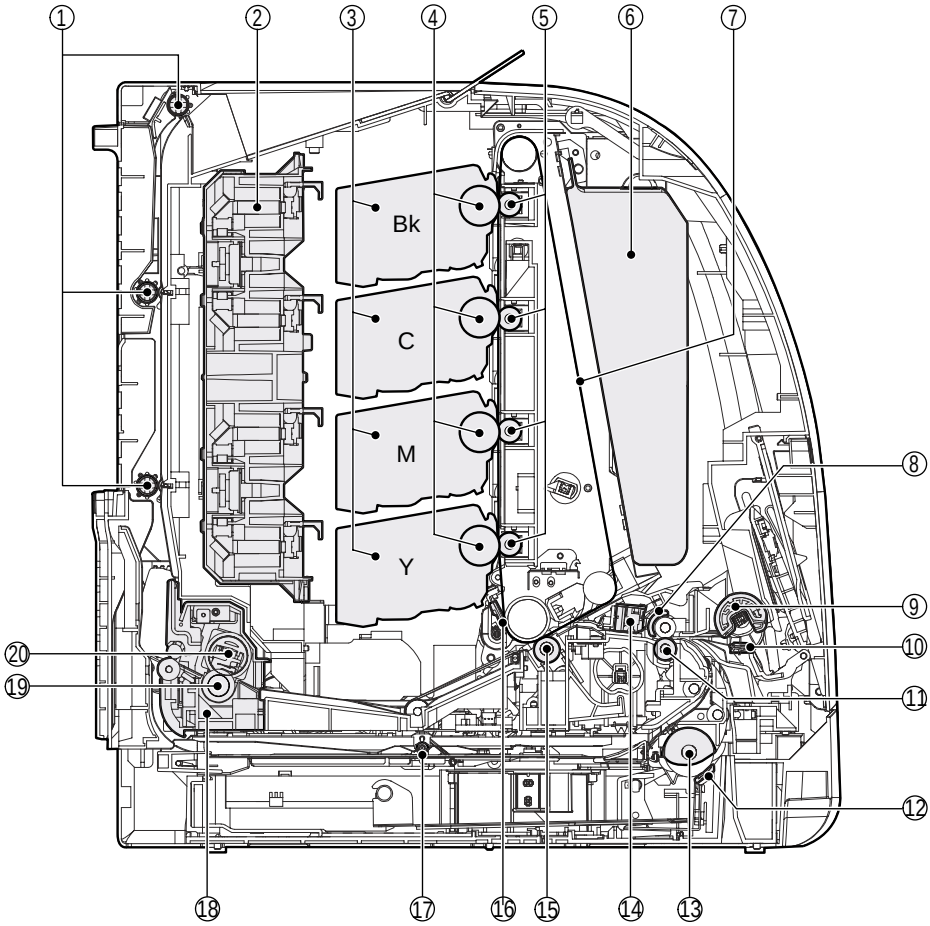


Figure 5-5 **CLJ 3500/3700 main components**

Reference	CLJ 3500/3700 component	Reference	CLJ 3500/3700 component
1	Face-down delivery roller	11	Registration roller
2	Laser/scanner assembly	12	Tray 2 separation roller
3	Print cartridge	13	Tray 2 pickup roller
4	Photo sensitive drum	14	Media sensor
5	Primary transfer charging roller	15	Secondary transfer charging roller
6	Toner collection unit	16	ITB cleaning blade
7	Transfer unit	17	Duplex feed roller
8	Registration shutter	18	Fuser
9	Tray 1pickup roller	19	Pressure roller
10	Tray 1 separation roller	20	Fuser sleeve unit

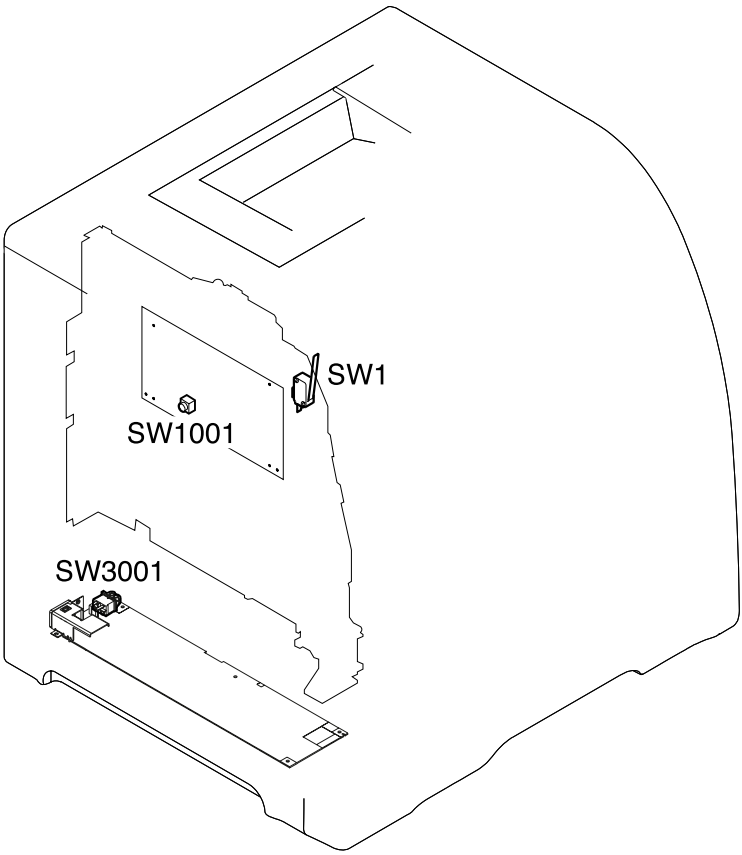


Figure 5-6 CLJ 3500/3700 location of switches

Reference	CLJ 3500/3700 component
SW1	Door switch
SW1001	Test print switch
SW3001	Power switch

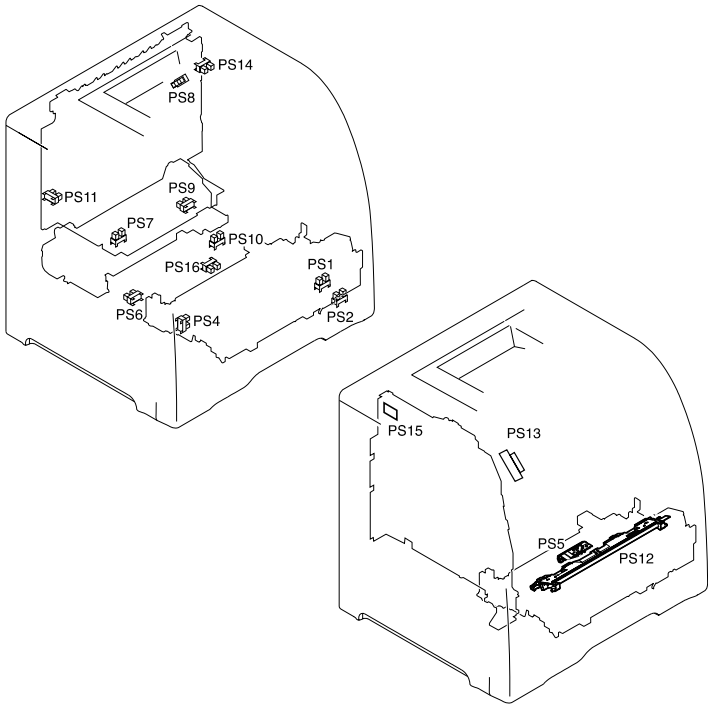


Figure 5-7 CLJ 3500/3700 location of sensors

Reference	CLJ 3500/3700 component	Reference	CLJ 3500/3700 component
PS1	Tray 1 paper sensor	PS10	Duplexing feed delivery sensor
PS2	Cassette paper sensor	PS11	Face-up tray sensor
PS4	Registration paper sensor	PS12	Color misregistration sensor
PS5	Media sensor	PS13	Waste toner level sensor
PS6	Fuser front paper sensor	PS14	Developing engaging sensor
PS7	Fuser delivery paper sensor	PS15	Environmental conditions sensor
PS8	Face-down delivery paper sensor	PS16	Secondary transfer roller engaging sensor
PS9	Reveresed paper sensor		

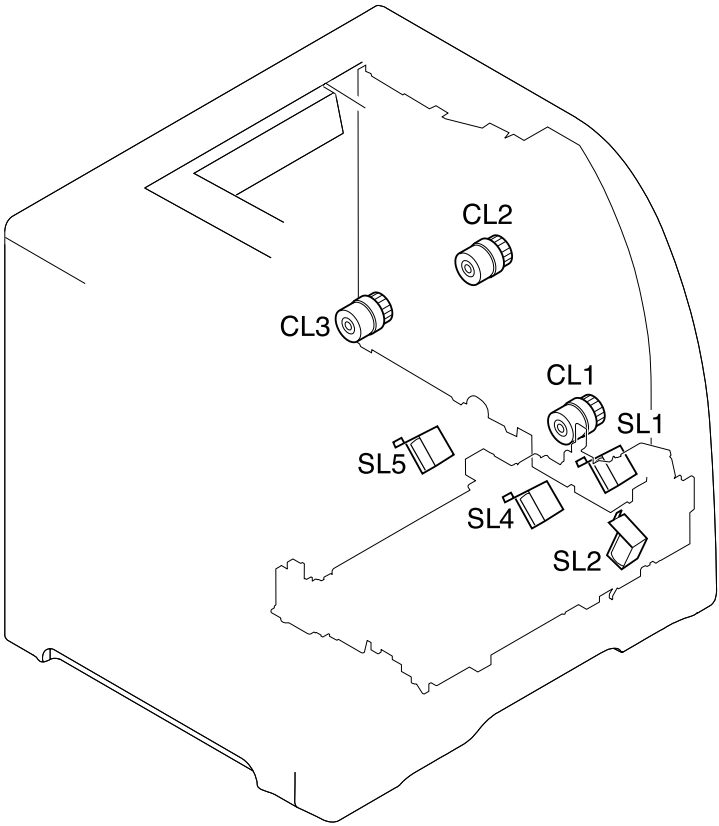


Figure 5-8 CLJ 3500/3700 location of solenoids and clutches

Reference	CLJ 3500/3700 component
SL1	Tray 1 pickup solenoid
SL2	Tray 2 pickup solenoid (pickup and feed assembly)
SL4	Secondary transfer roller engaging solenoid
SL5	Duplex feed solenoid
CL1	Registration clutch
CL2	K development clutch (image drive unit)
CL3	Developing engaging clutch (developing engaging drive unit)

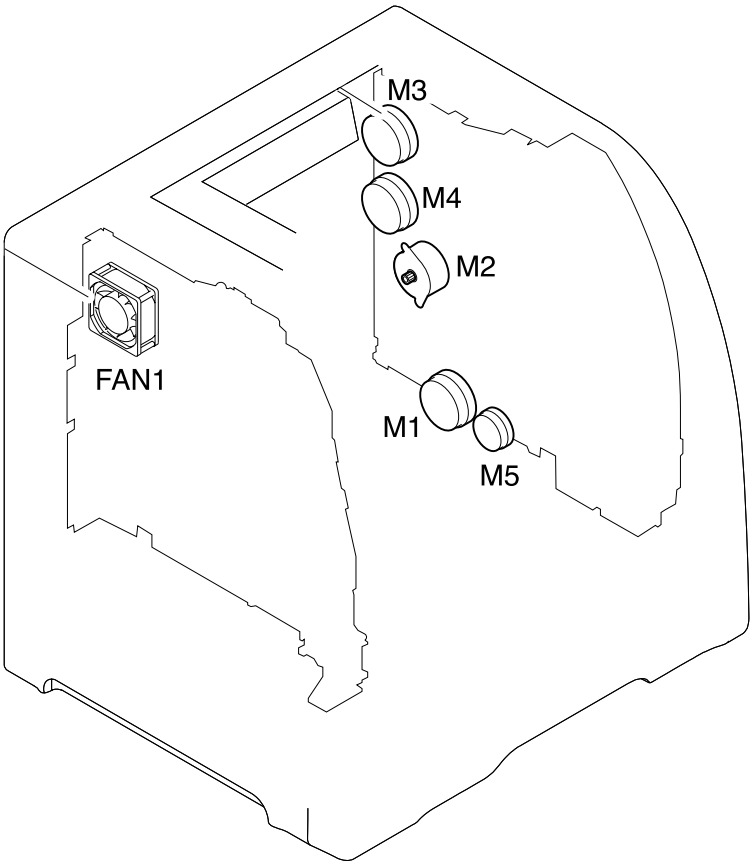


Figure 5-9 CLJ 3500/3700 location of motors and fans

Reference	CLJ 3500/3700 component
M1	Feed motor
M2	Delivery motor
M3	Drum motor
M4	Developing motor
M5	Primary transfer roller engaging motor
FAN1	Exhaust fan

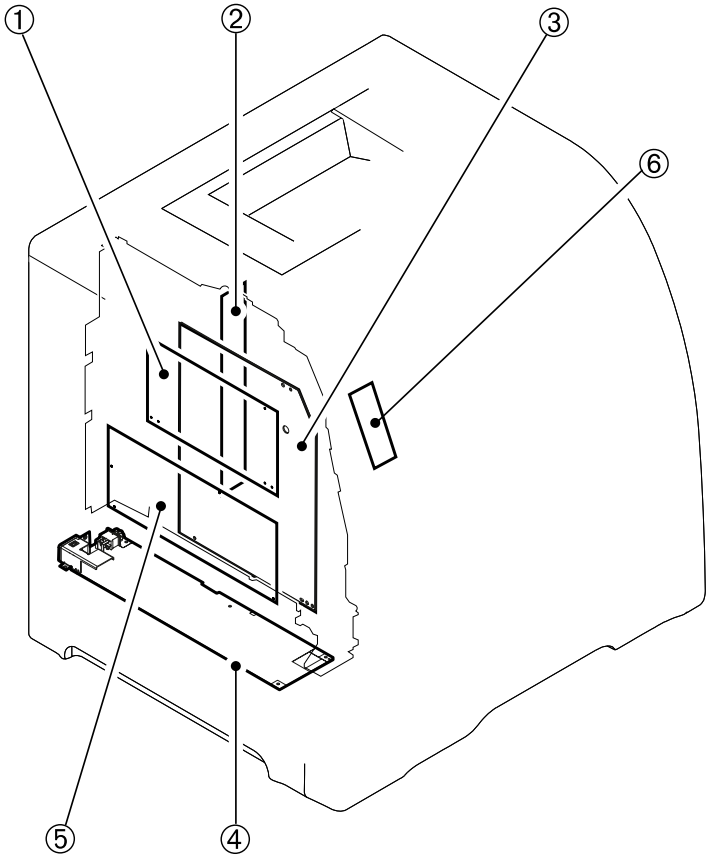


Figure 5-10 CLJ 3500/3700 location of PCBs

Reference	CLJ 3500/3700 component
1	DC controller PCB
2	Memory controller PCB
3	High-voltage power supply PCBs
4	Low-voltage power supply PCB
5	Formatter PCB
6	Control panel PCB

CLJ 4500/4550 major components

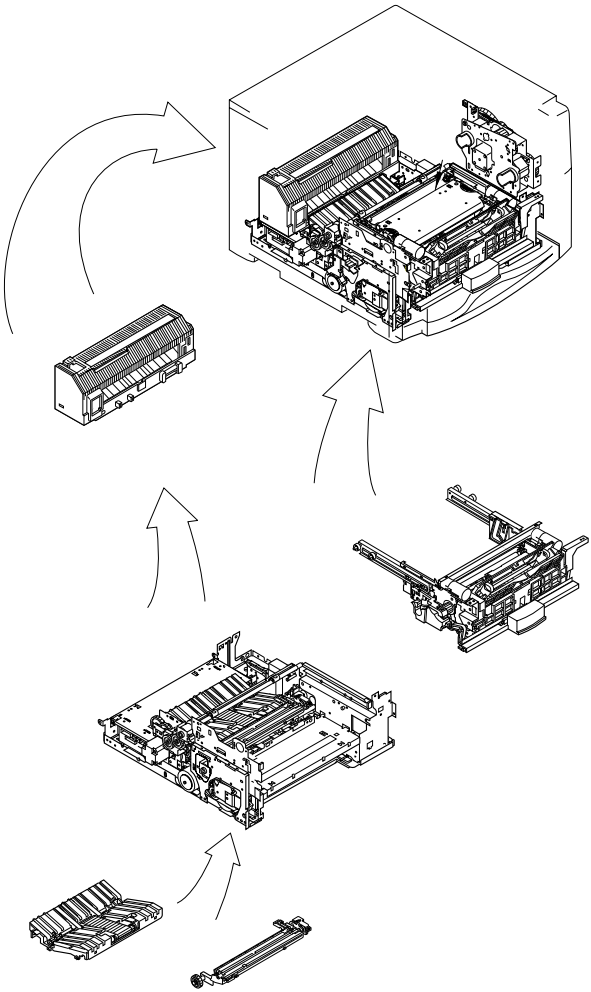


Figure 5-11 CLJ 4500/4550 assembly location diagram (1 of 2)

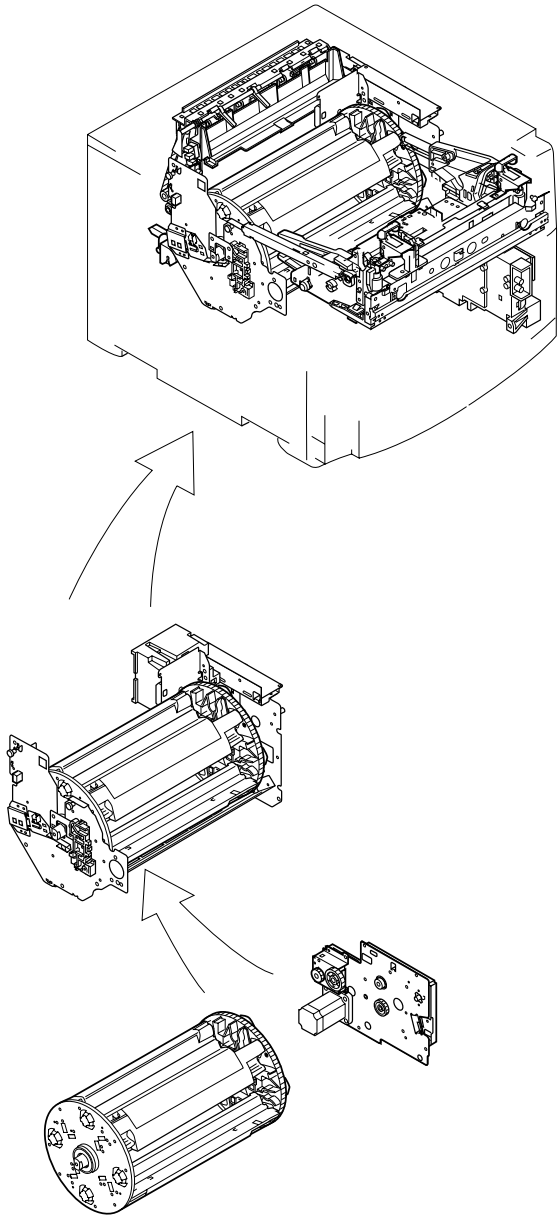


Figure 5-12 CLJ 4500/4550 assembly location diagram (2 of 2)

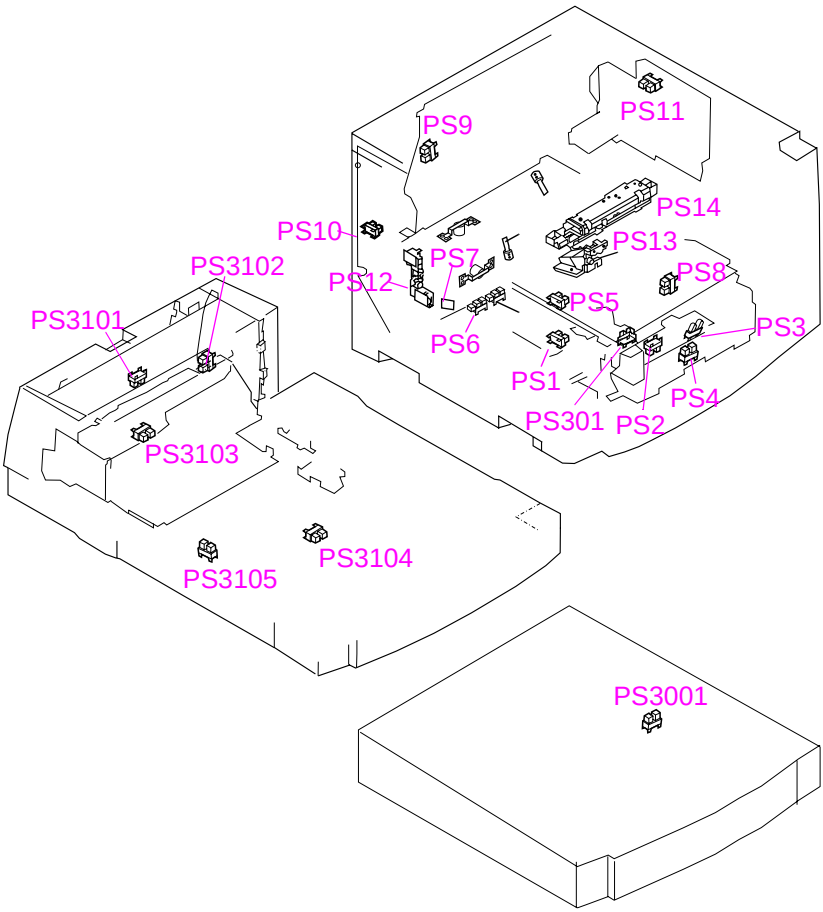


Figure 5-13 CLJ 4500/4550 sensor locations

This table corresponds to Table 5-13 on page 359

Reference	CLJ 4500/4550 component	Reference	CLJ 4500/4550 component
PS1	ITB unit life sensor	PS12	Toner level sensor
PS2	Registration paper sensor	PS13	Waste toner sensor
PS3	Last paper sensor	PS14	Density sensor
PS4	Multi-purpose tray paper sensor	PS301	OHT sensor (multi-purpose tray PCB)
PS5	ITB home position sensor	PS3001	Paper feed detection sensor
PS6	Fusing unit pressure release sensor	PS3101	Reversing unit paper sensor
PS7	Delivery paper sensor	PS3102	Face-up sensor
PS8	Cassette paper sensor	PS3103	Reversing unit stationary paper sensor
PS9	Face-down tray paper full sensor	PS3104	Duplex pick-up paper sensor
PS10	Carousel home position sensor	PS3105	Side registration home position sensor
PS11	Toner cartridge press sensor		

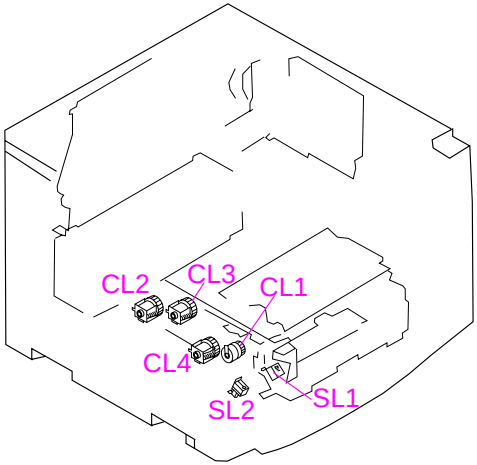


Figure 5-14 CLJ 4500/4550 printer solenoids and clutches

Reference	CLJ 4500/4550 component
SL1	Multi-purpose tray pick-up solenoid
SL2	Paper pick-up solenoid
CL1	Registration clutch
CL2	ITB unit separation clutch
CL3	ITB cleaning roller separation clutch
CL4	Secondary transfer roller separation clutch

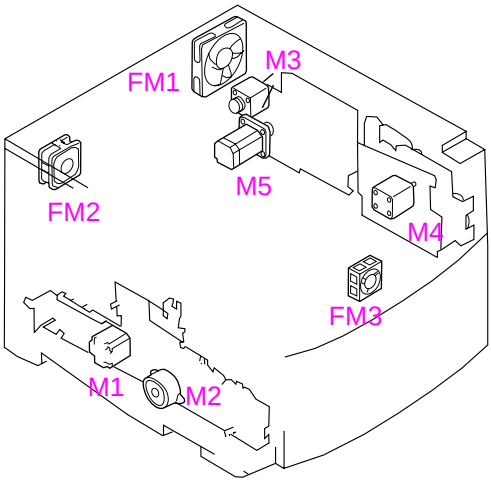


Figure 5-15 CLJ 4500/4550 motors and fans

Table 5-1 CLJ 4500/4550 motor and fan locations

Reference	CLJ 4500/4550 components	Reference	CLJ 4500/4550 components
M1	Fusing motor	M5	Toner cartridge motor
M2	Pick-up motor	FM1	Large fan
M3	Carousel motor	FM2	Small fan
M4	Drum motor	FM3	Front fan

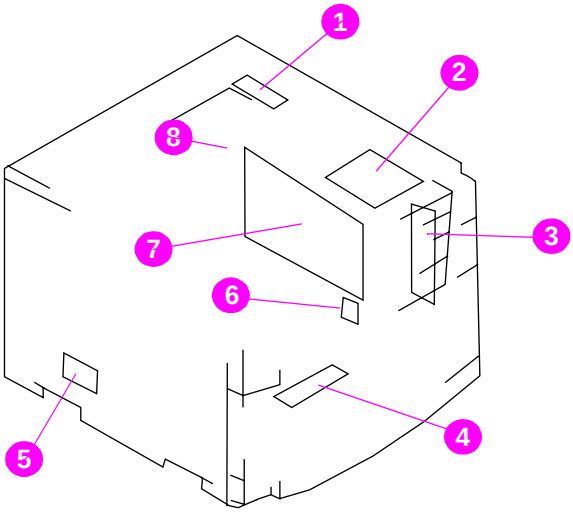


Figure 5-16 CLJ 4500/4550 PCB locations

Table 5-2 PCB assembly

Reference	CLJ 4500/4550 component
1	Developing PCB
2	DC controller PCB
3	Interconnect PCB
4	Paper size sensor PCB
5	Paper feed PCB assembly
6	Formatter PCB
7	Firmware DIMM
8	I/O card

CLJ 4600 major components

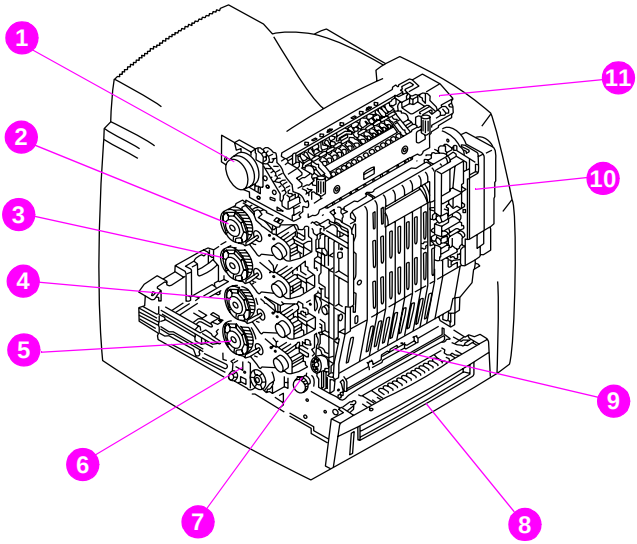


Figure 5-17 CLJ 4600 assembly location diagram

Reference	CLJ 4600 Component	Reference	CLJ 4600 Component
1	Fuser drive assembly	9	Paper pickup assembly
2	Drum drive assy (blk)	10	ETB assembly
3	Drum drive assy (c/m)	11	Fuser assembly
4	Drum drive assy (y)		
5	Drum drive assy (c/m)		
6	Disengaging drive assy		
7	Paper pickup drive assy		
8	Cassette		

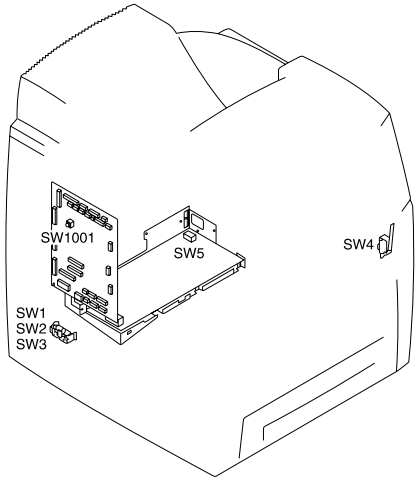


Figure 5-18 CLJ 4600 location of switches

Reference	CLJ 4600 Component
SW1	cassette paper size detection switch
SW2	cassette paper size detection switch
SW3	cassette paper size detection switch
SW4	door switch (shown in the photo below)
SW5	on/off switch
SW1001	test print switch

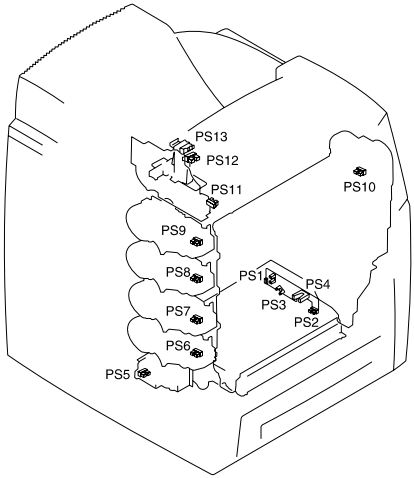


Figure 5-19 CLJ 4600 location of sensors

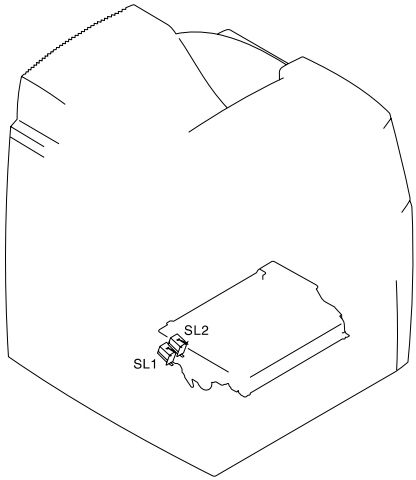


Figure 5-20 CLJ 4600 location of solenoids

Reference	CLJ 4600 Component
SL1	cassette pickup solenoid (paper pickup drive assembly)
SL2	multi-purpose tray pickup solenoid (paper pickup drive assembly)

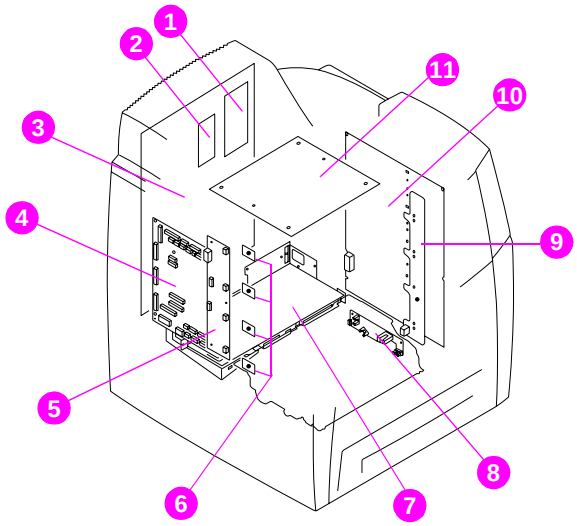


Figure 5-21 CLJ 4600 PCB locations

Reference	CLJ 4600 Component
1	I/O daughter card
2	Firmware DIMM
3*	Formatter (simplex)
	Formatter (duplex)
4	DC controller PCB
5	Memory controller PCB
6	Memory tag antenna PCBs
7	Low-voltage power supply PCB
8	Pickup PCB
9	Toner sensor PCB
10	High-voltage power supply PCB
11	Fuser power supply PCB

* The formatter is available with either simplex or duplex capability. Be sure to use the correct formatter for the model of printer you are servicing. The HP Color LaserJet 4600 and 4600n printers do not have duplex capability.

CLJ 5500 major components

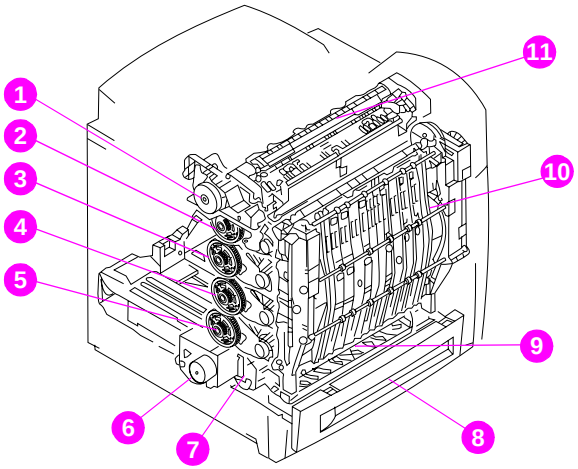


Figure 5-22 CLJ 5500 assembly location diagram

Reference	CLJ 5500 component
1	Fuser drive assembly
2	Drum drive assembly (black)
3	Drum drive assembly (cyan/magenta)
4	Drum drive assembly (yellow)
5	Drum drive assembly (cyan/magenta)
6	Disengaging drive assembly
7	Paper pickup drive assembly
8	Cassette
9	Paper pickup assembly
10	ETB assembly
11	Fuser assembly

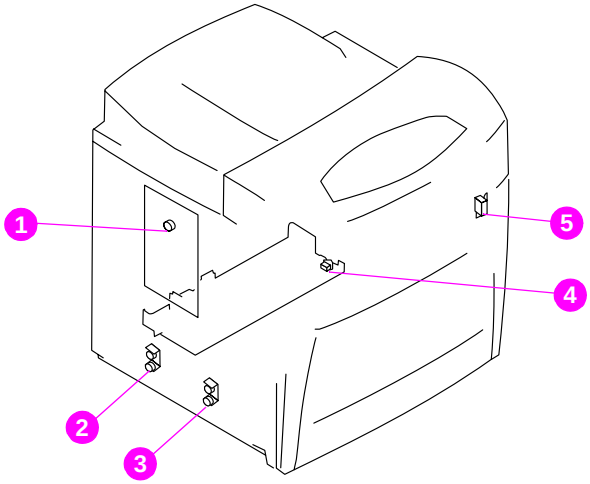


Figure 5-23 CLJ 5500 location of switches

Reference	CLJ 5500 component
1	test print switch, SW101
2	paper length detection switch, SW1, SW2, SW3
3	paper width detection switch, SW4, SW5, SW6
4	power switch
5	door open detection switch, SW1

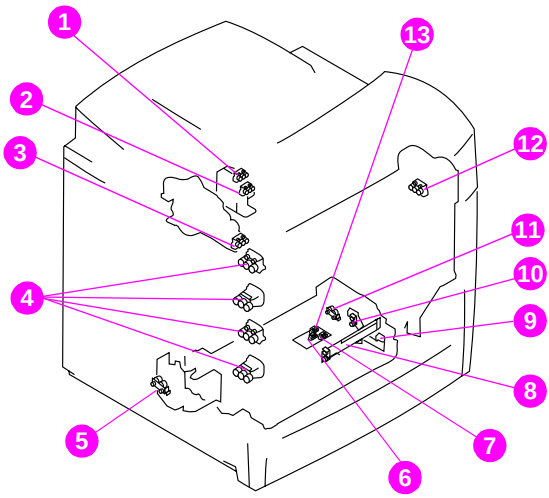


Figure 5-24 CLJ 5500 location of sensors

Reference	CLJ 5500 component
1	output bin full sensor, PS6
2	fuser delivery sensor, PS7
3	fuser paper sensor, PS8
4	cartridge home position sensors, PS1, PS2, PS3, PS4
5	developing disengaging sensor, PS5
6	paper stack surface sensor, PS902
7	cassette paper sensor, PS901
8	horizontal registration/transparency sensor, IS1
9	top of page sensor, PS801
10	multi-purpose tray paper sensor, PS802
11	pickup sensor, PS9
12	ETB speed sensor, PS10
13	paper feed sensor, PS903

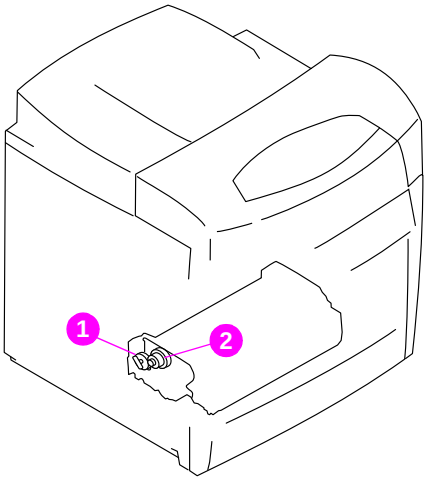


Figure 5-25 CLJ 5500 location of solenoid and clutch

Reference	CLJ 5500 component
1	multi-purpose tray pickup solenoid, SL1
2	cassette pickup clutch, CL1

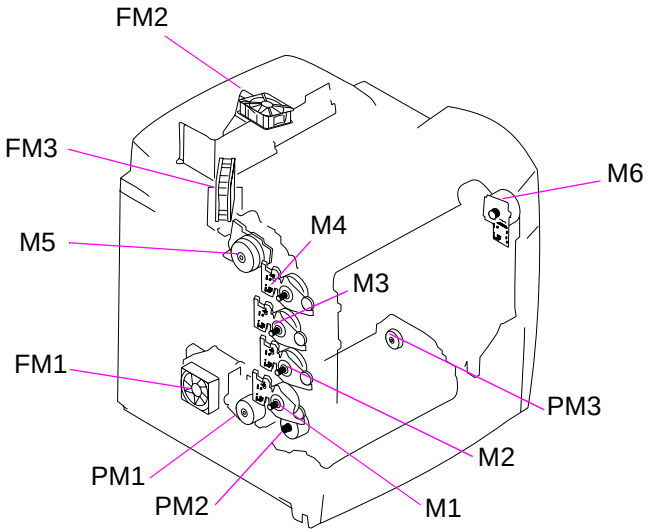


Figure 5-26 CLJ 5500 location of motors and fans

Reference	CLJ 5500 component	Reference	CLJ 5500 component
M1	cyan drum motor	M6	ETB motor
M2	yellow drum motor	PM1	developing disengaging motor
M3	magenta drum motor	PM2	pickup motor
M4	black drum motor	PM3	lifter motor
M5	fuser motor	FM1	power supply fan
FM2	formatter fan		
FM3	cartridge fan		

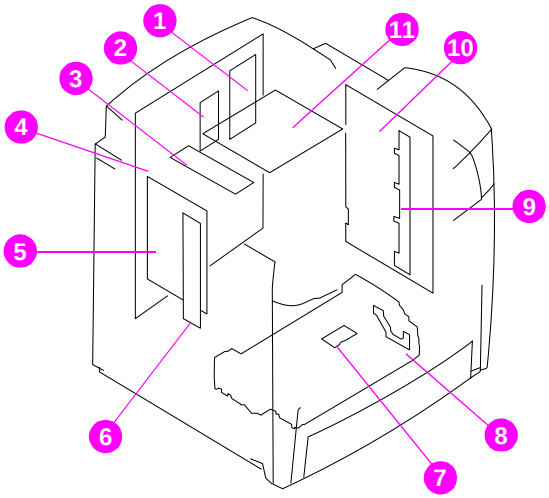


Figure 5-27 CLJ 5500 PCB locations

Reference	CLJ 5500 component
1	I/O daughter card
2	Firmware DIMM
3	Static discharge PCB assembly
4*	Formatter (simplex)
	Formatter (duplex)
5	DC controller PCB
6	E-label memory controller PCB
7	Cassette sensor PCB
8	Multi-purpose tray sensor PCB
9	Toner sensor PCB
10	High-voltage power supply PCB
11	Fuser power supply PCB

* The formatter is available with either simplex or duplex capability. Be sure to use the correct formatter for the model of printer you are servicing. The HP Color LaserJet 5500 and 5500n printers do not have duplex capability.

CLJ 8500/8550 major components

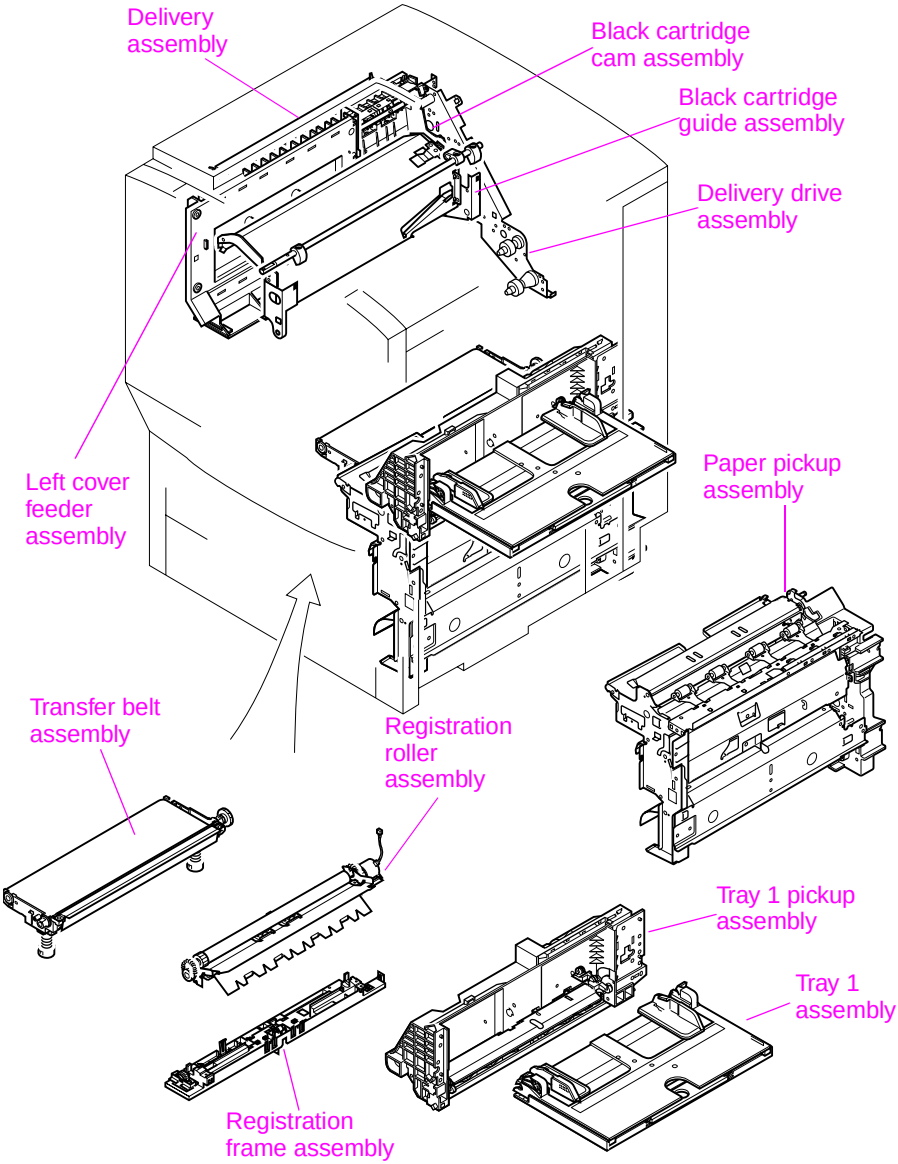


Figure 5-28 CLJ 8500/8550 major assembly locations (1 of 2)

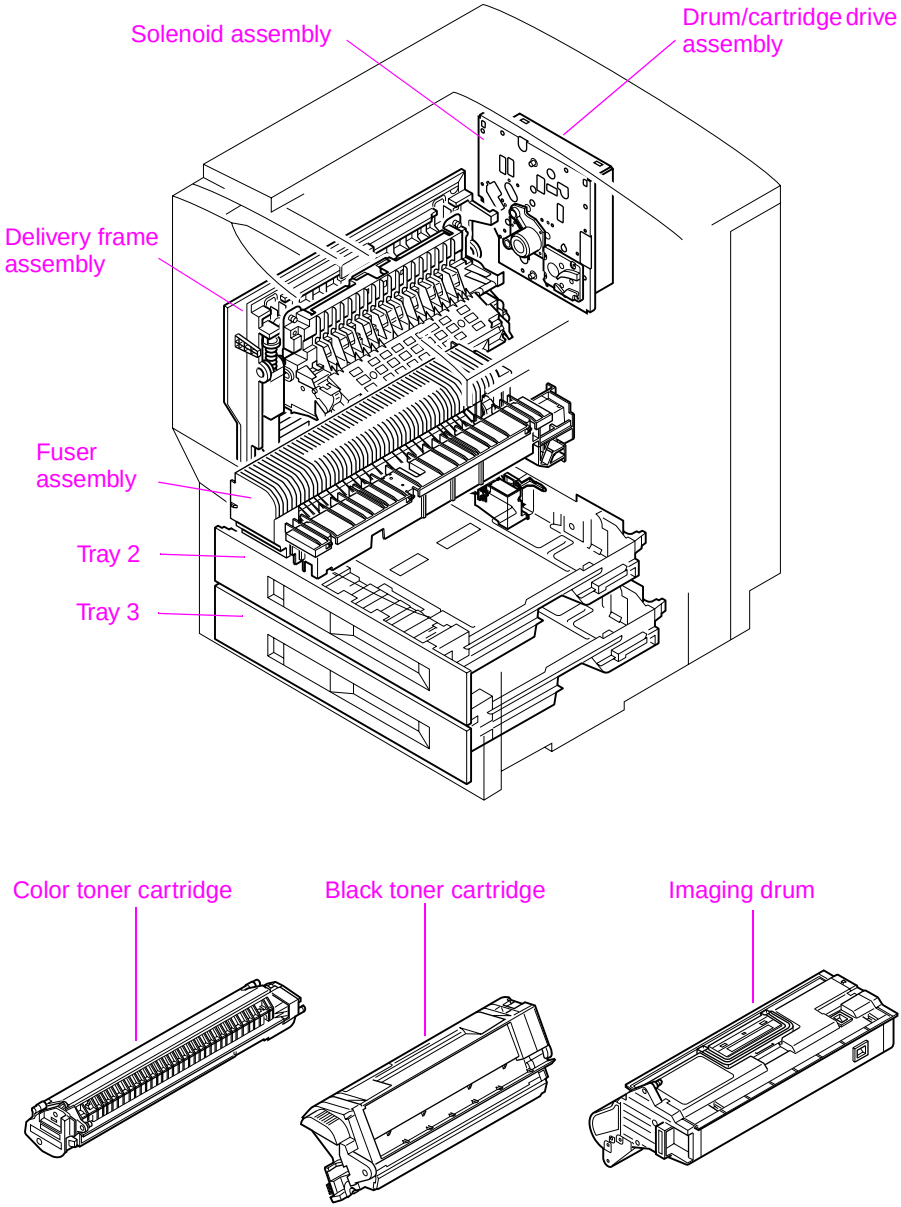


Figure 5-29 CLJ 8500/8550 major assembly locations (2 of 2)

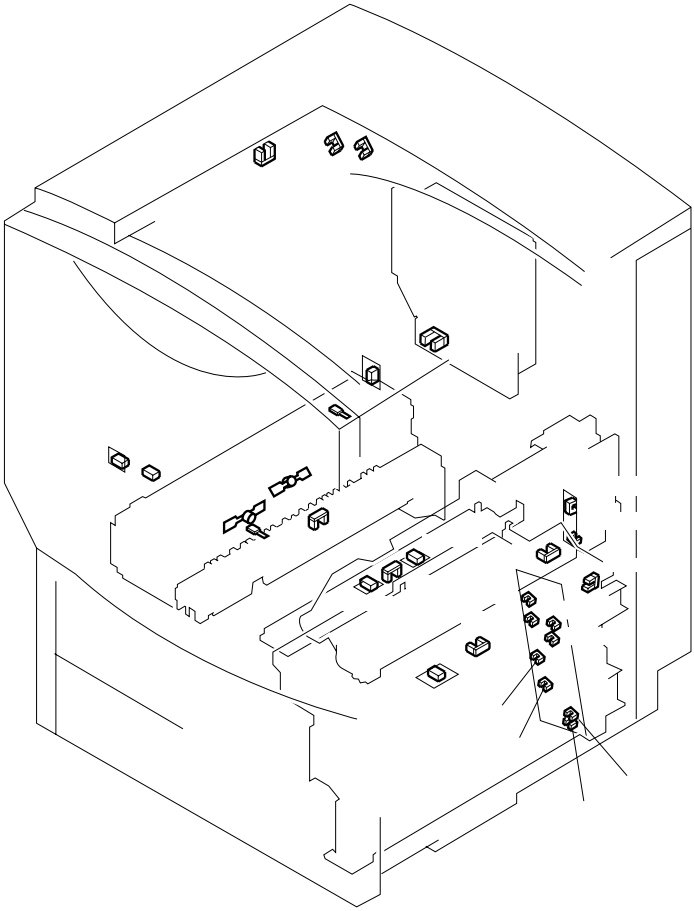


Figure 5-30 **CLJ 8500/8550 printer sensors**

Reference	CLJ 8500/855 component	Reference	CLJ 8500/8550 component
PS1	Registration roller paper sensor	PS1206	Tray 2 paper-level sensor 1
PS3	Carousel position sensor	PS1207	Tray 3 paper-out sensor
PS5	Separation sensor	PS1208	Tray 2 paper-out sensor
PS10	Top (face-down) output bin paper-full sensor	PS1301	Tray 1 paper sensor

Reference	CLJ 8500/855 component	Reference	CLJ 8500/8550 component
PS11	Top (face-down) output bin delivery sensor	PS1302	Lifting plate position sensor
PS17	Pick-up unit paper sensor	PS1801	OHT sensor 1
PS18	Pick-up unit cover sensor	PS1802	OHT sensor 2
PS19	Tray 1 last page sensor	PS1901C	Color toner cartridge sensor
PS29	Tray 2 last page sensor	PS1902	Color toner lever sensor
PS30	Left cover sensor	PS1903	Fusing delivery sensor
PS1201	Tray 3 sensor	THU	Upper thermistor
PS1202	Tray 2 sensor	THL	Lower thermistor
PS1203	Tray 3 paper-level sensor 2	TPU	Upper thermo switch
PS1204	Tray 3 paper-level sensor 1	TPL	Lower thermo switch
PS1205	Tray 2 paper-level sensor 2		

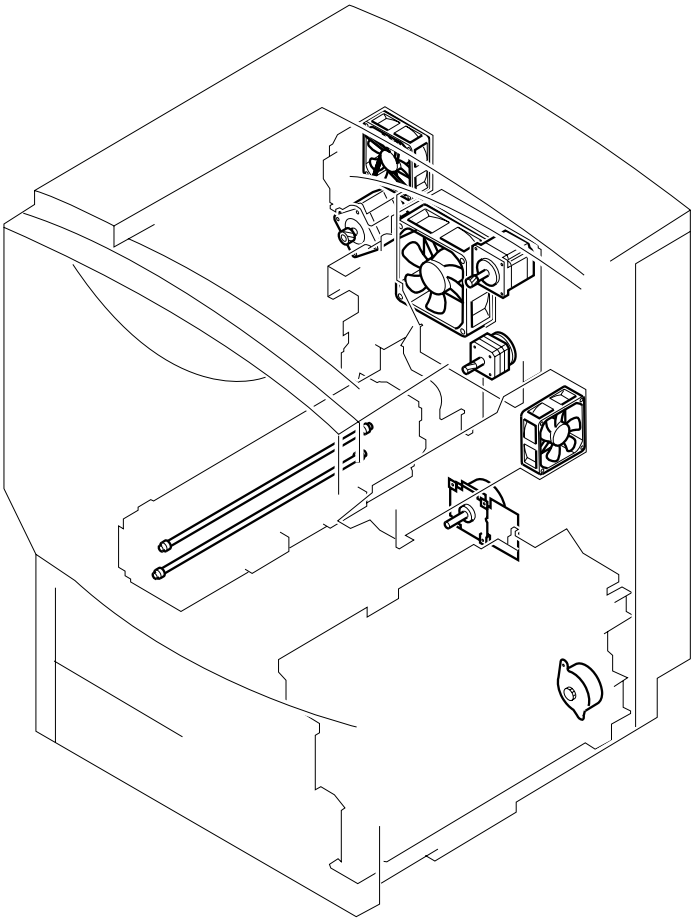


Figure 5-31 CLJ 8500/8550 printer motors and heaters

Reference	CLJ 8500/855 component	Reference	CLJ 8500/855 component
M1	Carousel motor	FM1	Fan 1 motor
M2	Drum motor	FM2	Fan 2 motor
M3	Cartridge motor	FM3	Fan 3 motor
M4	Main motor	HU	Upper fuser heater
M5	Pick-up motor	HL	Lower fuser heater

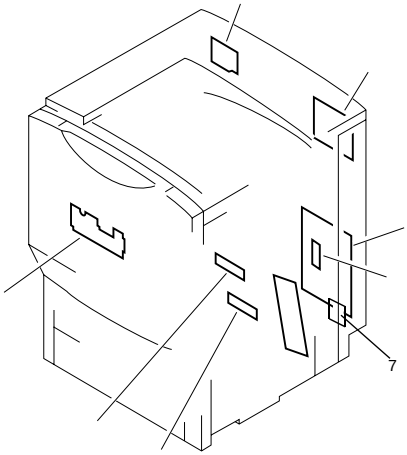


Figure 5-32 CLJ 8500/8550 PCA assemblies

Reference	CLJ 8500/855 component
1	PCA, cassette-size sensing
2	PCA, main relay
3	PCA, controller board PCA, controller board for HP CLJ 8550 MFP
4	PCA, carousel motor (M1)
5	PCA, subrelay
6	PCA, tray 1
7	PCA, ECO-2 assembly (HP CLJ 8550 MPF)
	Interface PCB assembly (HP CLJ 8550 MPF)
	Interface cable (HP CLJ 8550 MPF)
	IOT cable (HP CLJ 8550 MPF)
	ECO-2 cable (HP CLJ 8550 MPF)

CLJ 9500 major components

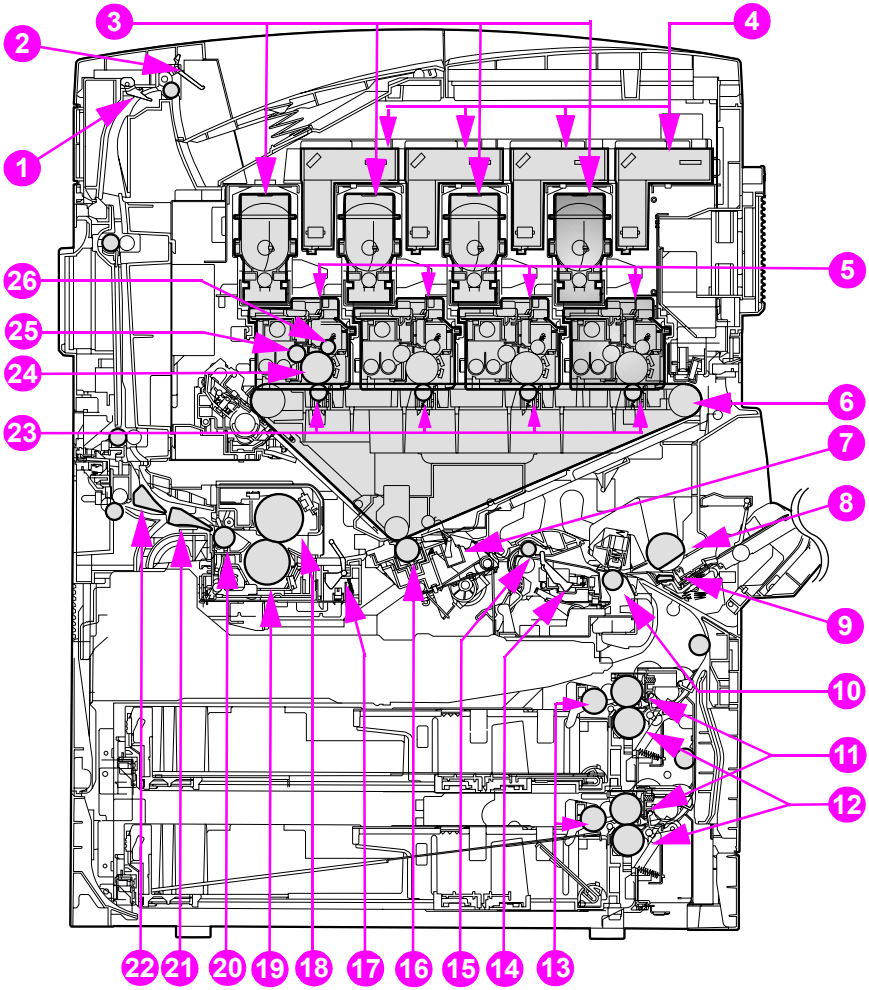


Figure 5-33 **CLJ 9500 major components**

Reference	CLJ 9500 components
1	Face-down tray delivery sensor flag
2	Face-down tray paper-full sensor flag
3	T cartridges (T-CRG; print cartridges)
4	Laser/scanner assemblies
5	P cartridges (P-CRG; image drums)
6	Intermediate transfer belt (ITB assembly)
7	Secondary transfer assembly
8	Tray 1 pickup roller
9	Separation pad
10	Pre-registration roller
11	Feed roller
12	Separation roller
13	Pickup roller
14	Registration paper sensor flag
15	Registration roller
16	Secondary transfer roller (T2)
17	Fusing front paper sensor flag
18	Fusing roller
19	Pressure roller
20	Fusing delivery roller
21	Duplex deflector
22	Face-up deflector
23	Primary transfer roller (T1)
24	Photosensitive drum
25	Developing cylinder
26	Primary charging roller

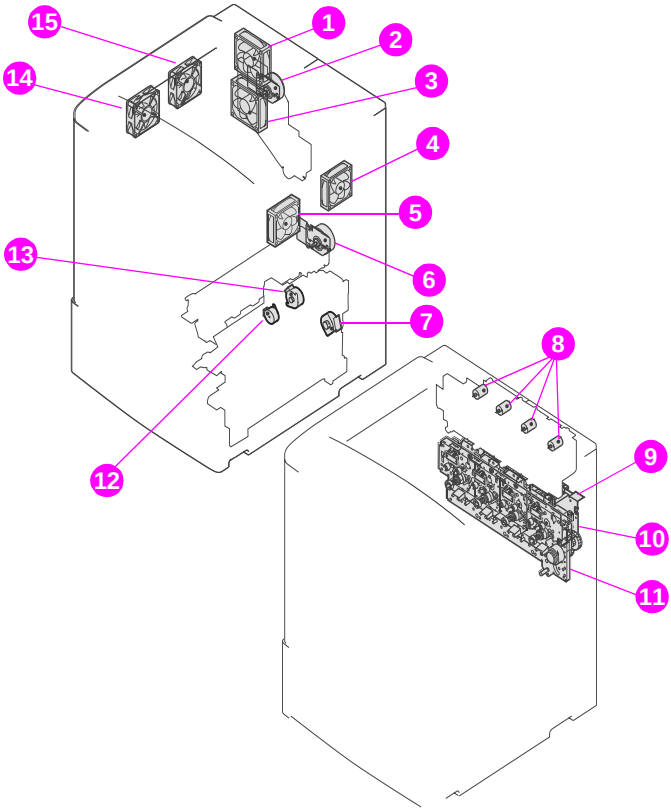


Figure 5-34 **CLJ 9500 location of motors and fans**

Reference	CLJ 9500 component	Reference	CLJ 9500 component
1	Delivery fan	9	ITB motor
2	Fuser motor	10	Drum motor
3	Fuser fan	11	Developing motor
4	Upper right fan	12	Pickup roller up/down motor
5	Ozone fan	13	Lifter motor
6	Registration motor	14	Front face-up delivery fan
7	Pickup motor	15	Rear face-up delivery fan
8	Print cartridge motors		

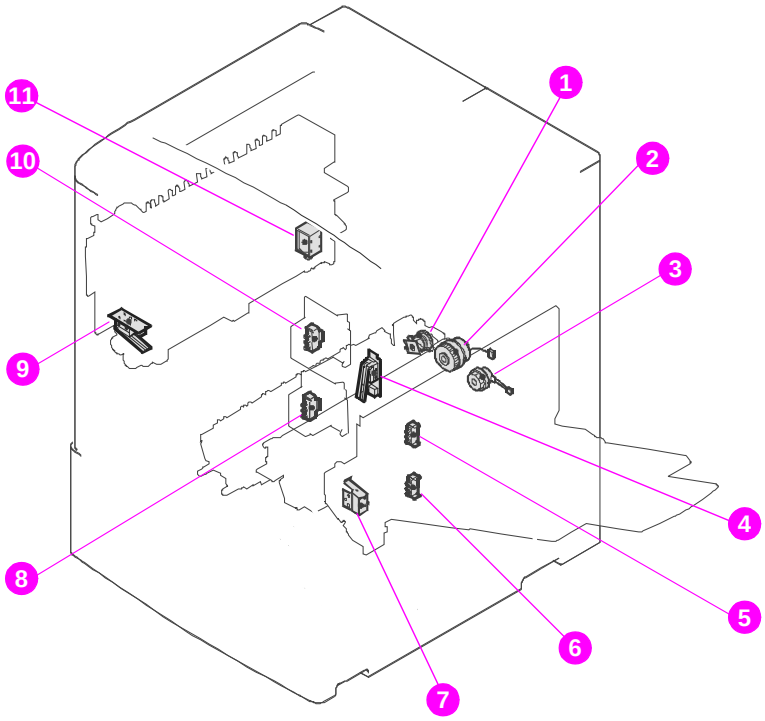


Figure 5-35 CLJ 9500 location of switches, solenoids, and clutches

Reference	CLJ 9500 component	Reference	CLJ 9500 component
1	Secondary transfer clutch	7	Tray 1 pickup solenoid
2	Registration clutch	8	Tray 3 paper length detection switch
3	Pre-registration clutch	9	Left door switch
4	Right door switch	10	Tray 2 paper length detection switch
5	Trat 2 paper width detection switch	11	Face-up deflector solenoid
6	Tray 3 paper width detection switch		

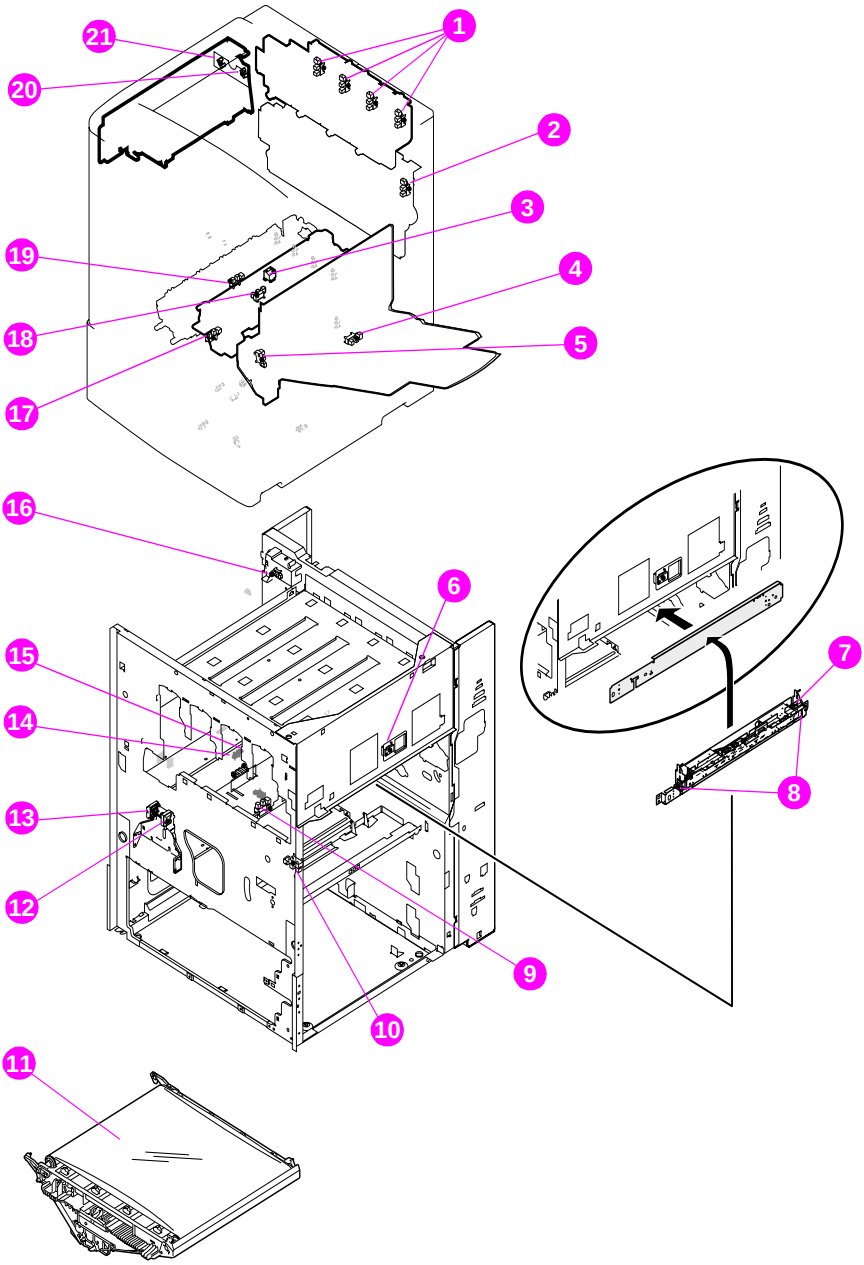


Figure 5-36 **CLJ 9500 location of sensors**

Reference	CLJ 9500 components
1	Print cartridge motor rotation sensors
2	ITB rotation sensor
3	Transparency sensor
4	Last paper sensor
5	Tray 1 paper sensor
6	Temperature/humidity sensor
7	Density sensor
8	Color registration sensor
9	Front fusing paper sensor
10	ITB sensor
11	ITB temperature sensor
12	Waste tone full notice sensor
13	Waste tone full warning sensor
14	Pressure disengaging sensor
15	Fusing delivery paper sensor
16	Upper left door sensor
17	Multifeed sensor
18	Registration paper sensor
19	Front secondary transfer paper sensor
20	Face-down tray paper-full sensor
21	Face-down tray delivery sensor

Power-on sequences

CLJ 2500

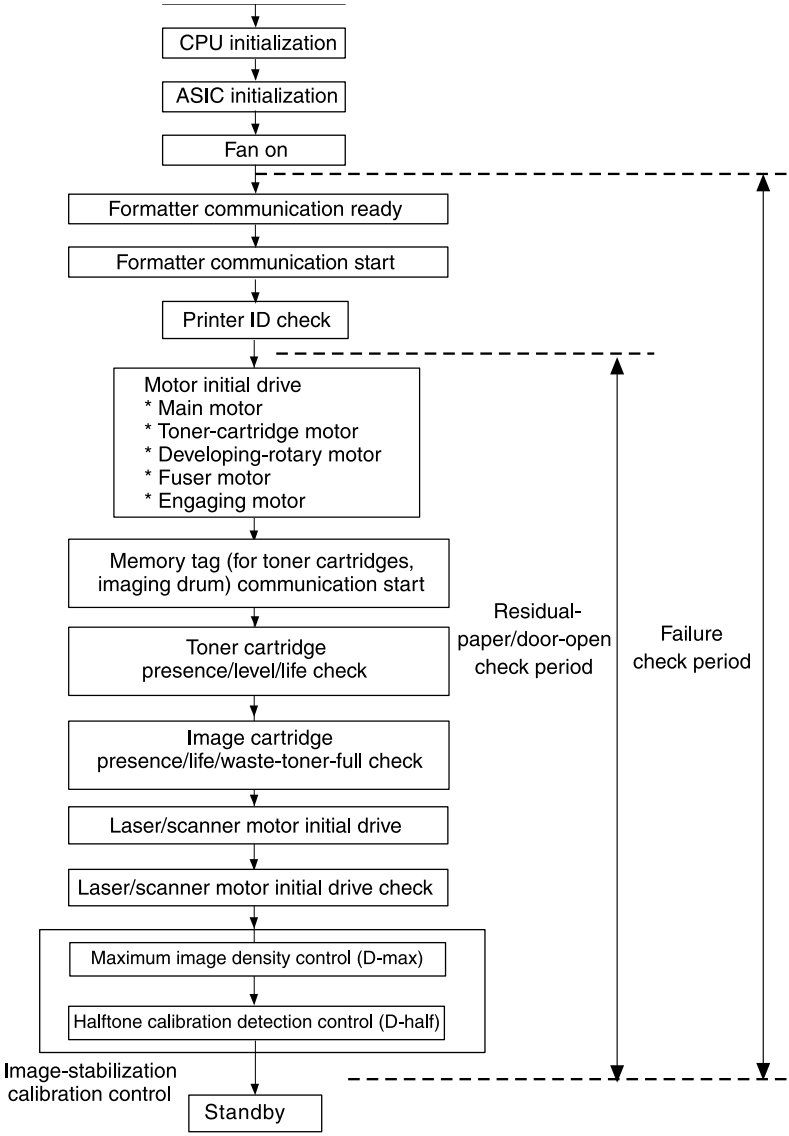
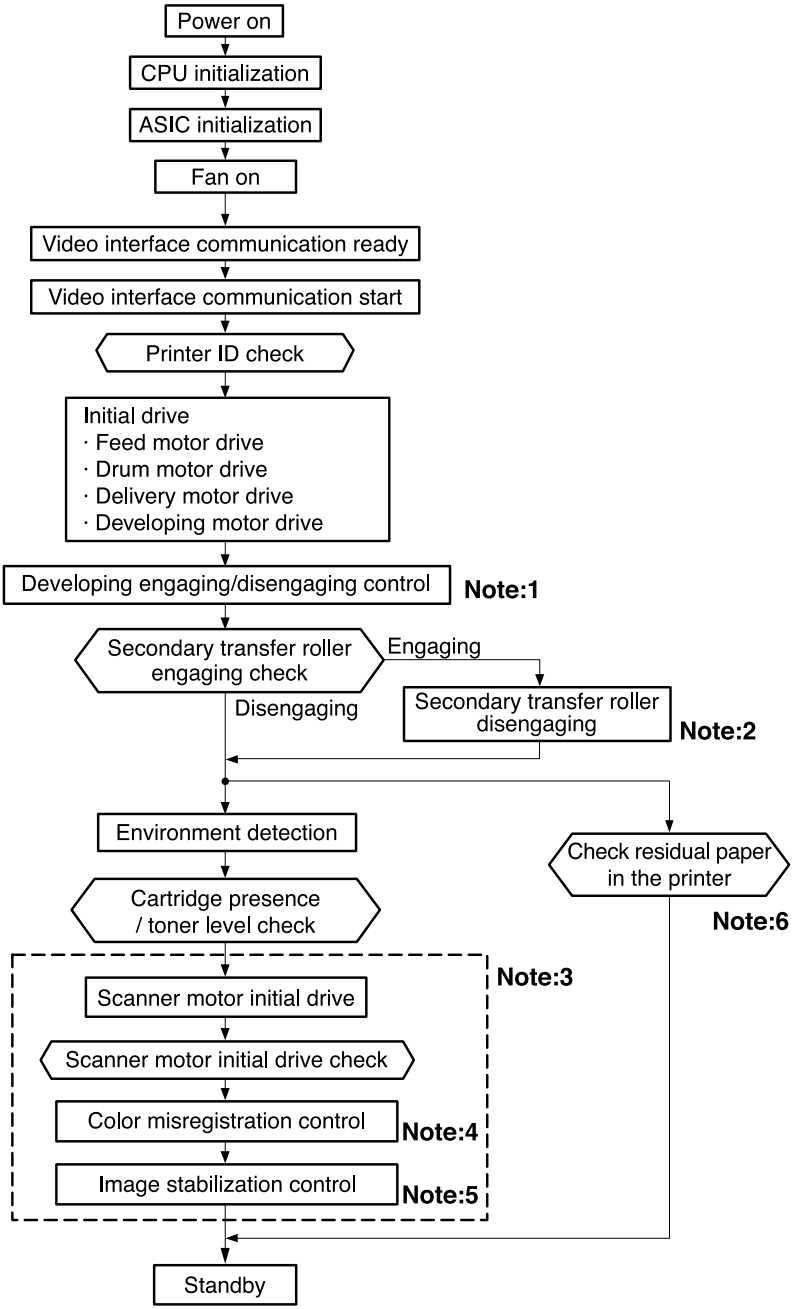


Table 5-3 Basic operation sequence (CLJ 3500/3700)

Period		Purpose	Remark
WAIT (wait period)	From the time the power switch is turned on until the ITB cleaning is completed.	Clear the charge from the drum surface and clean the ITB.	Detect the presence of the cartridge and the environmental conditions. Control the color misregistration and the image stability as required.
STBY (standby period)	From the end of the WAIT or LSTR period until either a print command is sent from the formatter or the power switch is turned off.	To keep the printer ready to print.	Go into "sleep" when a sleep command is sent from the formatter. Adjust the color misregistration and controls the image stability according to the executable command.
INTR (initial rotations period)	From the time the formatter sends a print command until the registration paper sensor detects the end of the paper.	Stabilize the sensitivity of the photosensitive drum to be ready for printing.	
PRINT (print period)	From the time the INTR period is completed and the /TOP signal is sent to the formatter until the fuser delivery paper sensor detects the paper.	Form the image on the photosensitive drum according to the VIDEO signal sent from the formatter and transfer the toner image to the paper via the ITB.	Carry out the image stabilization control every specified number of print or time after the power is turned on.
LSTR (last rotations period)	From the end of PRINT until the delivery motor stops.	Deliver the paper out of the printer.	Return to the INTR period as soon as another print command is sent from the formatter.


Power on
CPU initialization
ASIC initialization
Fan on
Video interface communication ready
Video interface communication start
Printer ID check
Initial drive
· Feed motor drive
· Drum motor drive
· Delivery motor drive
· Developing motor drive
Developing engaging/disengaging control
Note:1
Secondary transfer roller engaging check
Engaging
Disengaging
Secondary transfer roller disengaging
Note:2
Environment detection
Cartridge presence / toner level check
Check residual paper in the printer
Note:6
Note:3
Scanner motor initial drive
Scanner motor initial drive check
Color misregistration control
Note:4
Image stabilization control
Note:5
Standby

CLJ 4500/4550

This information is not available for this product.

CLJ 4600

Table 5-4 Basic operation sequence (CLJ 4600)

Period		Purpose	Remark
WAIT (wait period)	From the time the power switch is turned on until the ETB cleaning is completed.	To clear a potential on the drum surface and to clean the ETB.	During this period, the printer checks the toner level and detects whether the cartridges are present. The printer also executes the pulse width modulation adjustment, color registration adjustment, and image density calibration control as required.
STBY (standby period)	From the end of the WAIT or LSTR period or last rotation until the formatter inputs a print command or until the power is turned off.	To keep the printer ready to print.	When the formatter sends a sleep command, the printer enters PowerSave mode.
INTR (initial rotations period)	From immediately after the formatter inputs a print command until the /TOP signal is sent to the formatter.	To stabilize the photosensitive drum's sensitivity in preparation for a print operation.	
PRINT (print period)	From the end of the INTR period until the leading edge detection sensor detects paper and then turns off the transfer positive bias.	To form an image on the photosensitive drum according to the video signal input from the formatter and to transfer the toner image to the paper.	After the power is turned on, the cartridge is cleaned every 35 pages and the ETB is cleaned every 100 pages.

Table 5-4 Basic operation sequence (CLJ 4600)

Period		Purpose	Remark
LSTR (last rotations period)	From the end of the PRINT period until the ETB motor stops.	To deliver the paper out of the printer and to clean the ETB.	The last rotations period lasts until the instant the formatter sends a print command. Then the initial rotations period starts again.

CLJ 5500

Table 5-5 Basic operation sequence (CLJ 5500)

Period		Purpose	Remark
WAIT (wait period)	From the time the power switch is turned on until the ETB cleaning is completed.	To clear a potential on the drum surface and to clean the ETB.	During this period, the printer checks the toner level and detects whether the cartridges are present. The printer also executes the pulse width modulation adjustment, color registration adjustment, and image density calibration control as required.
STBY (standby period)	From the end of the WAIT or LSTR period or last rotation until the formatter inputs a print command or until the power is turned off.	To keep the printer ready to print.	When the formatter sends a sleep command, the printer enters PowerSave mode.
INTR (initial rotations period)	From immediately after the formatter inputs a print command until the /TOP signal is sent to the formatter.	To stabilize the photosensitive drum's sensitivity in preparation for a print operation.	

Table 5-5 Basic operation sequence (CLJ 5500) (continued)

Period		Purpose	Remark
PRINT (print period)	From the end of the INTR period until the leading edge detection sensor detects paper and then turns off the transfer positive bias.	To form an image on the photosensitive drum according to the video signal input from the formatter and to transfer the toner image to the paper.	After the power is turned on, the cartridge is cleaned every 35 pages and the ETB is cleaned every 100 pages.
LSTR (last rotations period)	From the end of the PRINT period until the ETB motor stops.	To deliver the paper out of the printer and to clean the ETB.	The last rotations period lasts until the instant the formatter sends a print command. Then the initial rotations period starts again.

CLJ 8500/8550

This information is not available for this product.

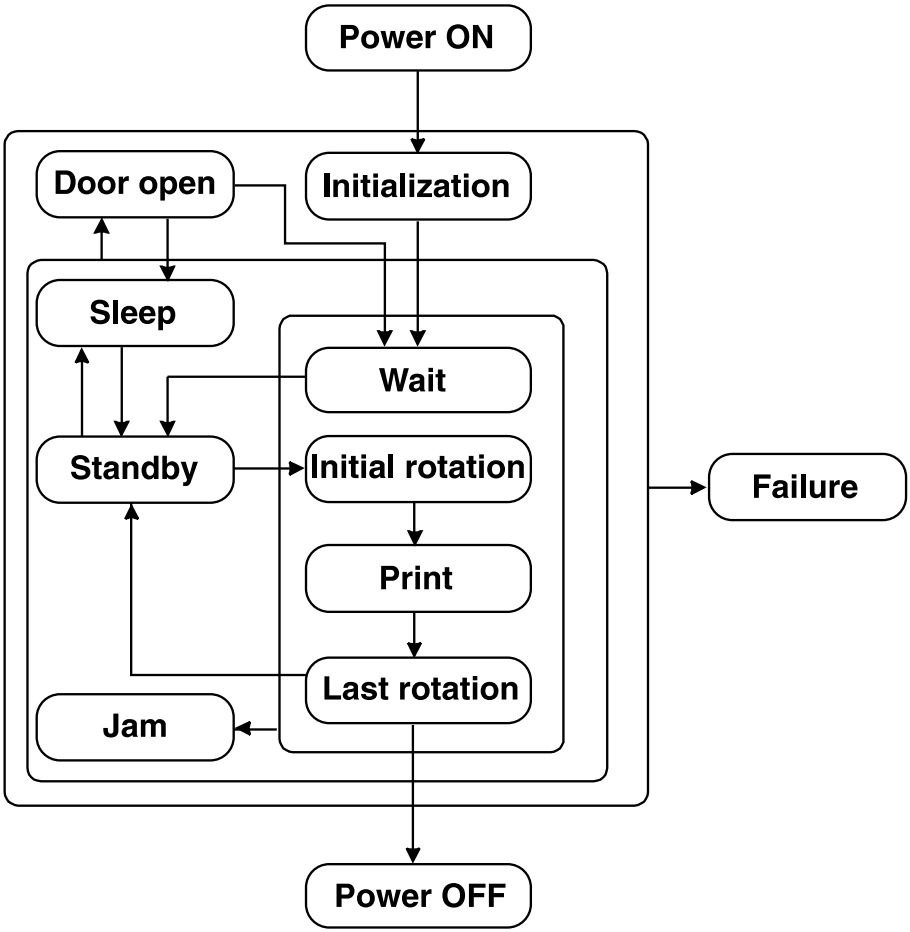

Power ON
Door open
Initialization
Sleep
Wait
Standby
Initial rotation
Failure
Print
Last rotation
Jam
Power OFF

Table 5-6 Normal sequence of operation (CLJ 9500)

State	Period	Operation
WAIT	From the time the power is turned on or a door is closed until the secondary transfer roller cleaning is complete	• power on • main CPU, sub CPU, and ASIC initialize • power-supply-fan rotates • memory tags are checked • formatter interface communication starts • high-voltage control sequence (values are set and the secondary transfer roller is cleaned) • adjustment is made to reach the standby temperature • calibrations are performed (D-max, D-half, CPR) • jam/door-open/failure/emergency-stop check is performed
STBY (standby)	From the end of the WAIT or LSTR period until either the print command is sent from the formatter, or the power is turned off	• print-start check is performed (search for print command) • automatic delivery-request check is performed (the formatter commands the feed rollers to eject residual pages in the paper path, and the ITB, fuser, registration, and pickup rollers turn on) • calibrations are performed • door open/failure check is performed
INTR (initial rotation)	From the input of a print reservation command from the formatter until start-up of the primary transfer bias	• motor rotates • fan motors rotate at full speed • laser scanner motor rotates • automatic power control (APC) is adjusted • initial-rotation final check is performed (OPC pre-ghost sequence occurs) • jam/door-open/failure/sleep check is performed

Table 5-6 Normal sequence of operation (CLJ 9500) (continued)

State	Period	Operation
PRINT	From the end of the INTR period until the secondary transfer bias is turned off	• fuser temperature control occurs • TOP signal turns on (engine to formatter output signal) • image control occurs • high-voltage control occurs • paper pickup control occurs • next-page-pickup timing is coordinated • toner is supplied to the drum cartridge • jam/door-open/failure/emergency-stop check
LSTR (last rotation)	From the end of the print operation until the drum motor and the ITB motor stop	• paper pickup control occurs • scanner motor stops • high-voltage control stops • fuser control reverts to standby • fan-motor control occurs

A Service support

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Obtaining work instructions

To gain access to work instructions

1. Open a Web browser, such as Internet Explorer or Netscape Navigator.
2. Type **http://partner.americas.hp.com** in the **Address** or **Go** box, and then press Enter.
3. Under **enter site**, click **hp partner web**.
4. Type your user name and password, and then click **OK**.
5. Click **support**.
6. Under **technical support information**, click **technical support website**.
7. Click **online work instructions**.
8. Select the product that you want from one of the lists.

Table 5-7 Commonly used work instructions

Product	Number	Descriptions
CLJ 4500 CLJ 4550	bpl90005	HP Color LaserJet 4500 and 4550 series Printers - Error 54.2
	bpl90006	HP Color LaserJet 4500 and 4550 series Printers - Printing Blank Pages
	bpl90008	HP Color LaserJet 4500 and 4550 series Printers - 13.0 Paper Jam (HP Color LaserJet 4500) 13.1 (HP Color LaserJet 4550)
	bpl90043	HP Color LaserJet 4500 and 4550 series Printers - Five Types of Ghosting
	bpl90129	HP Color LaserJet 4500 and 4550 series Printers - Middle Front Drawer Will Not Open or Close
CLJ 4600	bpl90333	HP Color LaserJet 4600 series Printers - Multi feeds from Tray 2 or Tray 3

Embedded web server

Use the HP Embedded Web Server to view information pages for the CLJ 2500, CLJ 4600, and CLJ 5500. Here is how to gain access to the embedded Web server.

1 Open a Web browser.

2 In the **Address** or **Go to** field, type the IP address assigned to the product (for example: http://192.168.1.1) or the host name (for example: http://myproduct).

If you do not know the IP address for the product, it is listed on the Configuration page.

Obtaining service notes

To gain access to service notes

1 Open a Web browser, such as Internet Explorer or Netscape Navigator.

2 Type **http://partner.americas.hp.com** in the **Address** or **Go** box, and then press Enter.

3 Under **enter site**, click **hp partner web**.

4 Type your user name and password.

5 Click **support**.

6 Under **technical support information**, click **technical support** website.

7 Click the product type, such as **laserjet** or **laserjet color**.

8 Select the product that you want from the list.

Service websites

HP Customer Care Online

Go to the following Web site for information about software drivers, support documentation, and frequently asked questions.

http://www.hp.com/go/support

HP learning center

The learning center make Web-based training modules available to HP partners. To open an account and access the learning center, go to the following Web sites.

- Direction for opening an account: htpp://vsslfpro.zcce.compaq/plm/contact/index.html
- Log-in page: http://vsslfpro.compaq/plm

Parts

Use the following Web site to search for HP product parts by using the HP product name or model number or part number, or by selecting an HP product from a list. See the *hp LaserJet Quick Reference Color Parts Guide* (5851-1642) for a complete parts list and printer illustrations

http://www.hp.com/go/partsinfo

To order parts, go to

http://www.partsdirect.hp.com

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hp color LaserJet 2500/2500L/2500n/2500tn/2500se
hp color LaserJet 3500/3500n
hp color LaserJet 3700/3700n/3700dn/3700dtn
hp color LaserJet 4500/4500n/4500dn
hp color LaserJet 4550/4550n/4550dn/4550hdn
hp color LaserJet 4600/4600dn/4600dtn/4600hdn
hp color LaserJet 5500/5500n/5500dn/5500dtn/5500htn
hp color LaserJet 8500/8500n/8500dn
hp color LaserJet 8550/8550n/8550dn/8550gn/8550mfp
hp color LaserJet 9500n/9500hdn

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